API Well Number: 43047522520000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER Morgan State 921-36P4BS	
2. TYPE OF WORK DRILL NEW WELL ● REENTER P&A WELL ○ DEEPEN WELL ○	**3. FIELD OR WILDCAT** NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO	**5. UNIT or COMMUNITIZATION AGREEMENT NAME**
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.	**7. OPERATOR PHONE** 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217	**9. OPERATOR E-MAIL** julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22265	**11. MINERAL OWNERSHIP** FEDERAL ○ INDIAN ○ STATE ● FEE ○
	12. SURFACE OWNERSHIP FEDERAL ○ INDIAN ○ STATE ● FEE ○
13. NAME OF SURFACE OWNER (if box 12 = 'fee')	**14. SURFACE OWNER PHONE (if box 12 = 'fee')**
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')	**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS** YES ● (Submit Commingling Application) NO ○
	19. SLANT VERTICAL ○ DIRECTIONAL ● HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	449 FSL 1003 FEL	SESE	36	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	580 FSL 494 FEL	SESE	36	9.0 S	21.0 E	S
At Total Depth	580 FSL 494 FEL	SESE	36	9.0 S	21.0 E	S

21. COUNTY UINTAH	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 494	**23. NUMBER OF ACRES IN DRILLING UNIT** 639
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 765	**26. PROPOSED DEPTH** MD: 10461 TVD: 10411
27. ELEVATION - GROUND LEVEL 5013	**28. BOND NUMBER** 22013542	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** 43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	12.25	8.625	0 - 2520	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 10461	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength	310	3.38	12.0
							50/50 Poz	1530	1.31	14.3

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME Danielle Piernot	**TITLE** Regulatory Analyst	**PHONE** 720 929-6156
SIGNATURE	**DATE** 12/21/2011	**EMAIL** danielle.piernot@anadarko.com
API NUMBER ASSIGNED 43047522520000	**APPROVAL**	Permit Manager

RECEIVED: March 20, 2012

Kerr-McGee Oil & Gas Onshore. L.P.

MORGAN STATE 921-36P4BS

Surface: 449 FSL / 1003 FEL SESE
BHL: 580 FSL / 494 FEL SESE

Section 36 T9S R21E

Unitah County, Utah
Mineral Lease: ML-22265

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2.a **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,282'	
Birds Nest	1,556'	Water
Mahogany	2,070'	Water
Wasatch	4,502'	Gas
Mesaverde	7,129'	Gas
Sego	9,315'	Gas
Castlegate	9,382'	Gas
MN5	9,811'	Gas
TVD =	10,411'	
TD =	10,461'	

2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

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4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:

7.a Blackhawk (Part of Mesaverde Formation) Target Formation

Maximum anticipated bottom hole pressure calculated at 10411' TVD, approximately equals 6,871 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,628 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9315' TVD, approximately equals 5,962 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,899 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

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This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

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Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

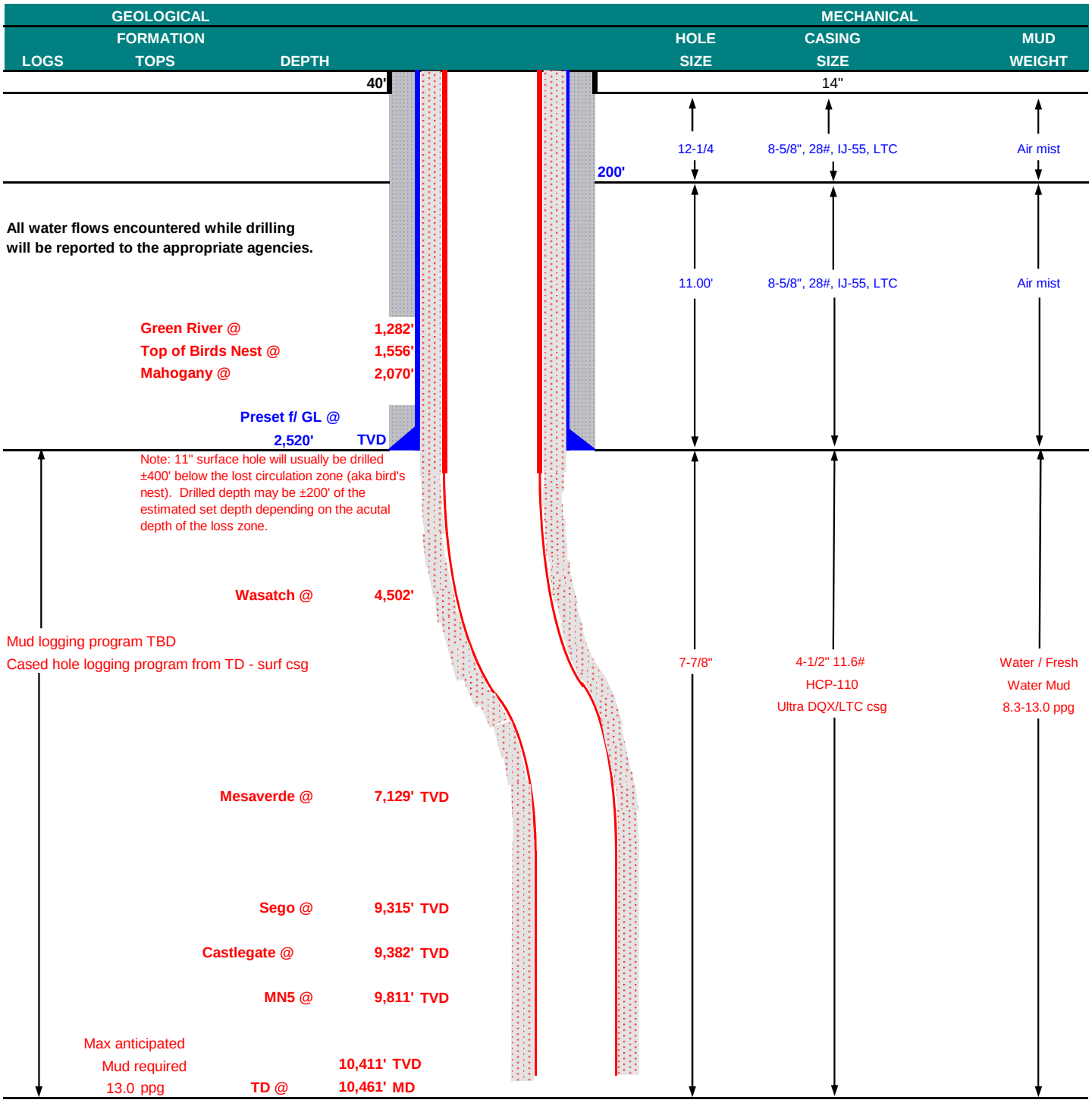
Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

BLACKHAWK DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	December 19, 2011
WELL NAME	**MORGAN STATE 921-36P4BS**	TD	10,411' TVD 10,461' MD
FIELD	Natural Buttes	COUNTY Uintah STATE Utah	FINISHED ELEVATION 5,010'
SURFACE LOCATION	SESE 449 FSL 1003 FEL	Sec 36 T 9S R 21E	
	Latitude: 39.986605	Longitude: -109.493557	NAD 27
BTM HOLE LOCATION	SESE 580 FSL 494 FEL	Sec 36 T 9S R 21E	
	Latitude: 39.986935	Longitude: -109.491742	NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK		
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.		



KERR-McGEE OIL & GAS ONSHORE LP

BLACKHAWK DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,520	28.00	IJ-55	LTC	2.14	1.59	5.63	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.23		3.78
	4-1/2"	5,000	to	10,461'	11.60	HCP-110	LTC	1.19	1.23	5.50	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,020'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,001'	Premium Lite II +0.25 pps	310	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	6,460'	50/50 Poz/G + 10% salt + 2% gel	1,530	35%	14.30		1.31
			+ 0.1% R-3					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: Nick Spence / Danny Showers / Chad Loesel **DATE:**

DRILLING SUPERINTENDENT: Kenny Gathings / Lovel Young **DATE:**

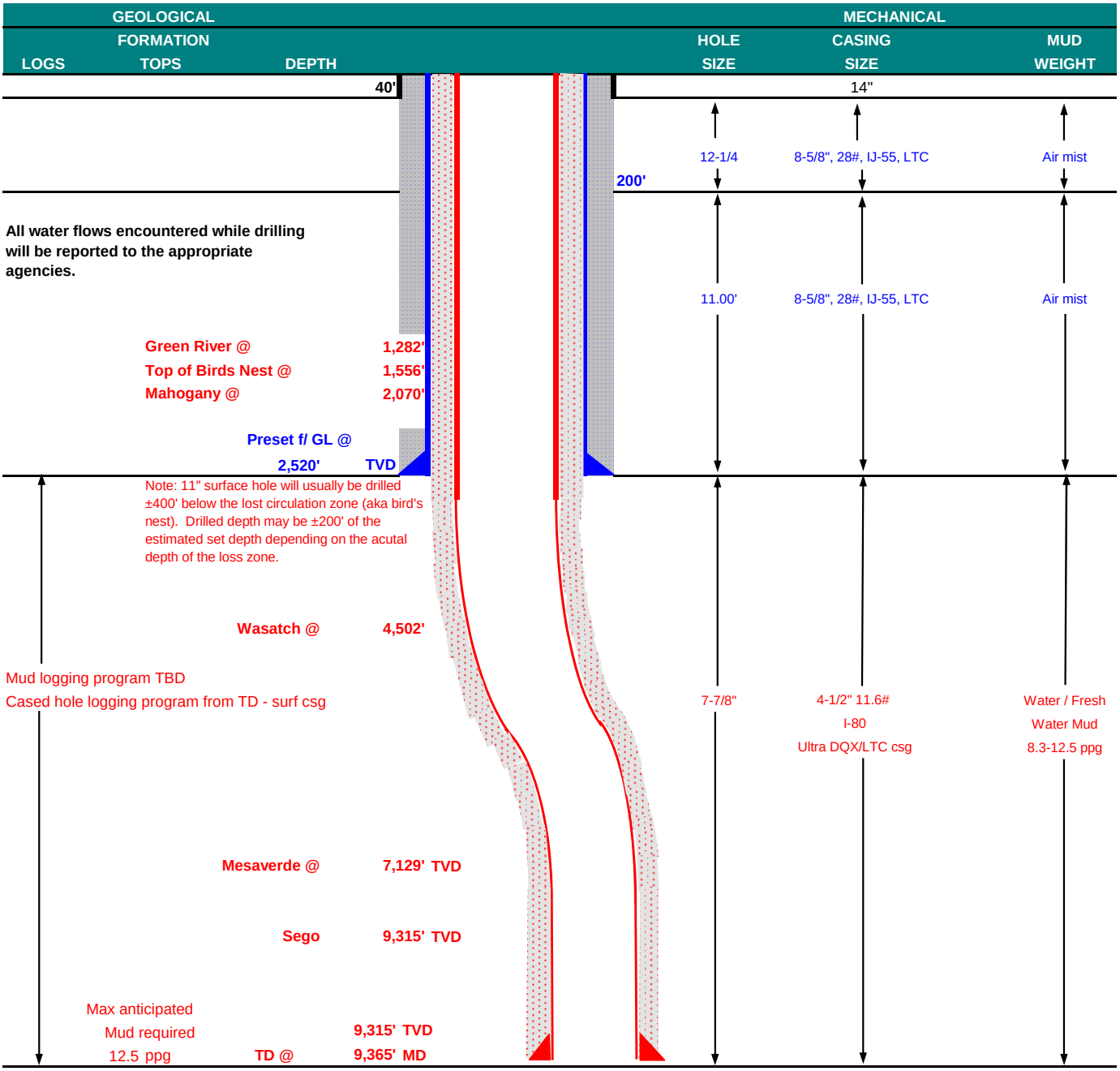
RECEIVED: December 21, 2011

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	December 19, 2011
WELL NAME	**MORGAN STATE 921-36P4BS**			TD	9,315' TVD 9,365' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah FINISHED ELEVATION 5,010'
SURFACE LOCATION	SESE 449 FSL 1003 FEL	Sec 36	T 9S	R 21E	
	Latitude: 39.986605	Longitude:	-109.493557		NAD 27
BTM HOLE LOCATION	SESE 580 FSL 494 FEL	Sec 36	T 9S	R 21E	
	Latitude: 39.986935	Longitude:	-109.491742		NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				



KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION	LTC	DQX
CONDUCTOR	14"	0-40'										
								3,390	1,880	348,000	N/A	
SURFACE	8-5/8"	0	to	2,520	28.00	IJ-55	LTC	2.14	1.59	5.63	N/A	
								7,780	6,350		267,035	
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.05		3.04	
								7,780	6,350	223,000		
	4-1/2"	5,000	to	9,365'	11.60	I-80	LTC	1.11	1.05	5.44		

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,020'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,995'	Premium Lite II +0.25 pps	310	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,370'	50/50 Poz/G + 10% salt + 2% gel	1,270	35%	14.30		1.31
			+ 0.1% R-3					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

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Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____

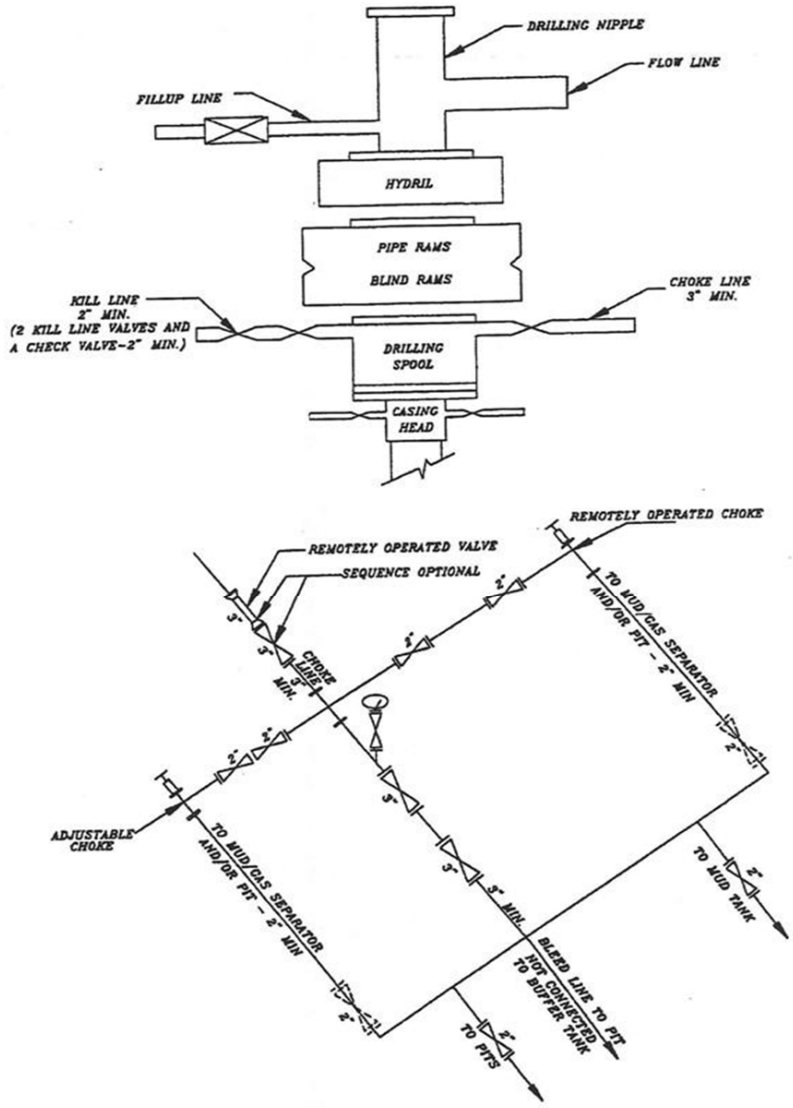
Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: December 21, 2011

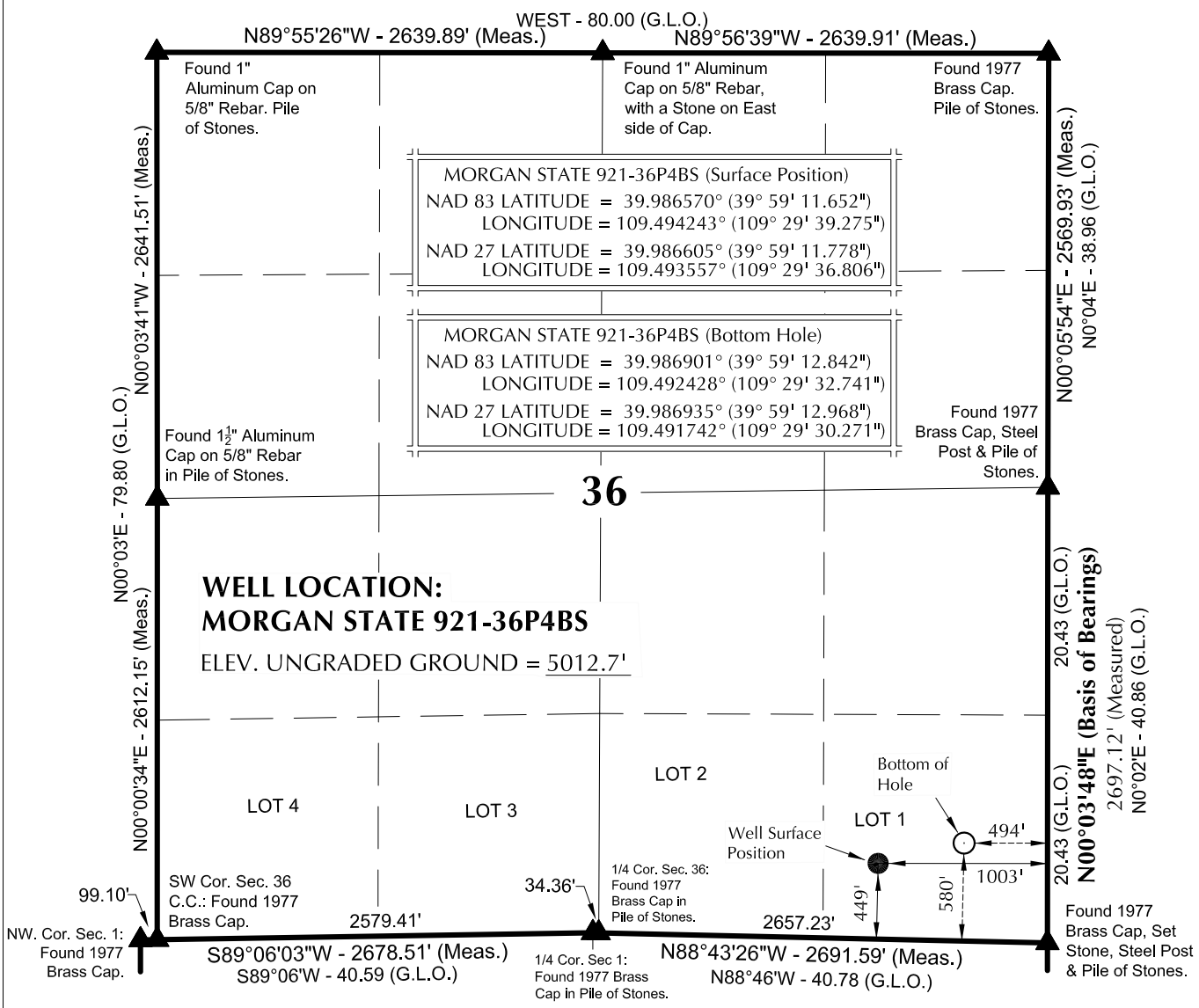
EXHIBIT A
MORGAN STATE 921-36P4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED: December 21, 2011

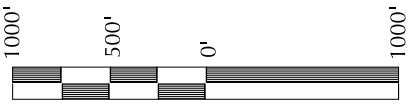
T9S, R21E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. The Bottom of hole bears N76°42'17"E 522.83' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SCALE

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

11-11-11

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

PROFESSIONAL ENGINEER AND LAND SURVEYOR
No.6028691
JOHN R
KAUGH
STATE OF UTAH

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD: MORGAN STATE 921-36P

MORGAN STATE 921-36P4BS
WELL PLAT
580' FSL, 494' FEL (Bottom Hole)
LOT 1 OF SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

609
CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 10-17-11	SURVEYED BY: J.W.	SHEET NO: 1
DATE DRAWN: 11-3-11	DRAWN BY: C.T.C.	1 OF 17
SCALE: 1" = 1000'	Date Last Revised:	

RECEIVED: December 21, 2011

API Well Number: 43047522520000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
MORGAN STATE 921-36P4BS	39°59'11.652" 39.986570°	109°29'39.275" 109.494243°	39°59'11.778" 39.986605°	109°29'36.806" 109.493557°	449' FSL 1003' FEL	39°59'12.842" 39.986901°	109°29'32.741" 109.492428°	39°59'12.968" 39.986935°	109°29'30.271" 109.491742°	580' FSL 494' FEL
MORGAN STATE 921-36P1CS	39°59'11.612" 39.986559°	109°29'39.392" 109.494276°	39°59'11.737" 39.986594°	109°29'36.923" 109.493590°	444' FSL 1012' FEL	39°59'16.113" 39.987809°	109°29'32.737" 109.492427°	39°59'16.239" 39.987844°	109°29'30.268" 109.491741°	911' FSL 494' FEL
MORGAN STATE 921-36P1BS	39°59'11.570" 39.986547°	109°29'39.508" 109.494308°	39°59'11.696" 39.986582°	109°29'37.039" 109.493622°	440' FSL 1021' FEL	39°59'19.394" 39.988720°	109°29'32.721" 109.492423°	39°59'19.519" 39.988755°	109°29'30.252" 109.491737°	1243' FSL 493' FEL
MORGAN STATE 921-36I4CS	39°59'11.529" 39.986536°	109°29'39.626" 109.494340°	39°59'11.655" 39.986571°	109°29'37.156" 109.493655°	436' FSL 1030' FEL	39°59'22.664" 39.989629°	109°29'32.718" 109.492422°	39°59'22.790" 39.989664°	109°29'30.248" 109.491736°	1574' FSL 493' FEL
MORGAN STATE 921-36I4BS	39°59'11.488" 39.986525°	109°29'39.742" 109.494373°	39°59'11.614" 39.986559°	109°29'37.273" 109.493687°	431' FSL 1039' FEL	39°59'25.935" 39.990538°	109°29'32.714" 109.492421°	39°59'26.061" 39.990573°	109°29'30.245" 109.491735°	1905' FSL 493' FEL
MORGAN STATE 13-36	39°59'12.514" 39.986810°	109°29'36.822" 109.493562°	39°59'12.640" 39.986844°	109°29'34.352" 109.492876°	540' FSL 812' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

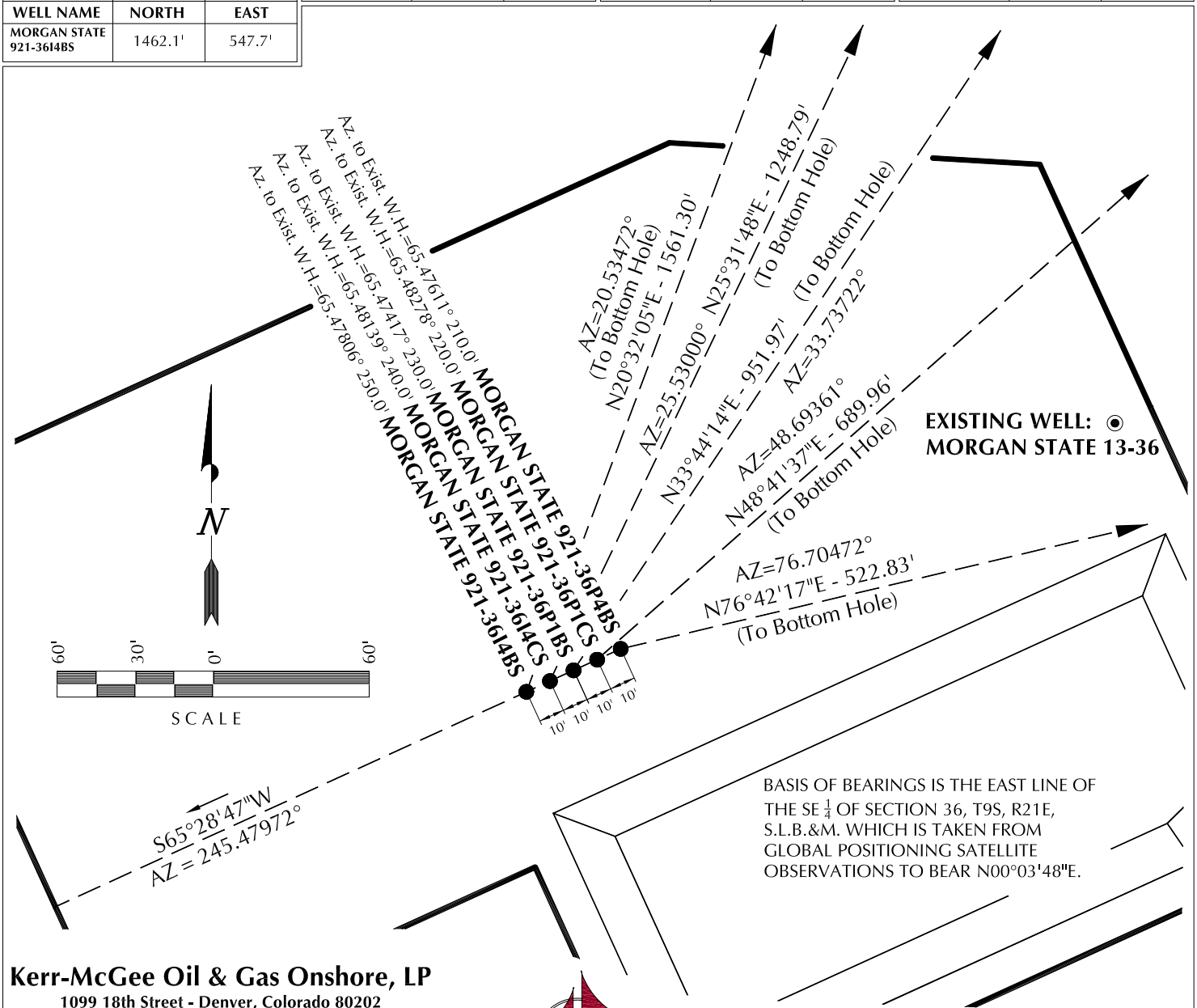
WELL NAME	NORTH	EAST
MORGAN STATE 921-36P4BS	120.2'	508.8'

WELL NAME	NORTH	EAST
MORGAN STATE 921-36P1CS	455.4'	518.3'

WELL NAME	NORTH	EAST
MORGAN STATE 921-36P1BS	791.7'	528.7'

WELL NAME	NORTH	EAST
MORGAN STATE 921-36I4CS	1126.9'	538.2'

WELL NAME	NORTH	EAST
MORGAN STATE 921-36I4BS	1462.1'	547.7'



Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-36P

WELL PAD INTERFERENCE PLAT
WELLS: MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS, MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS & MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

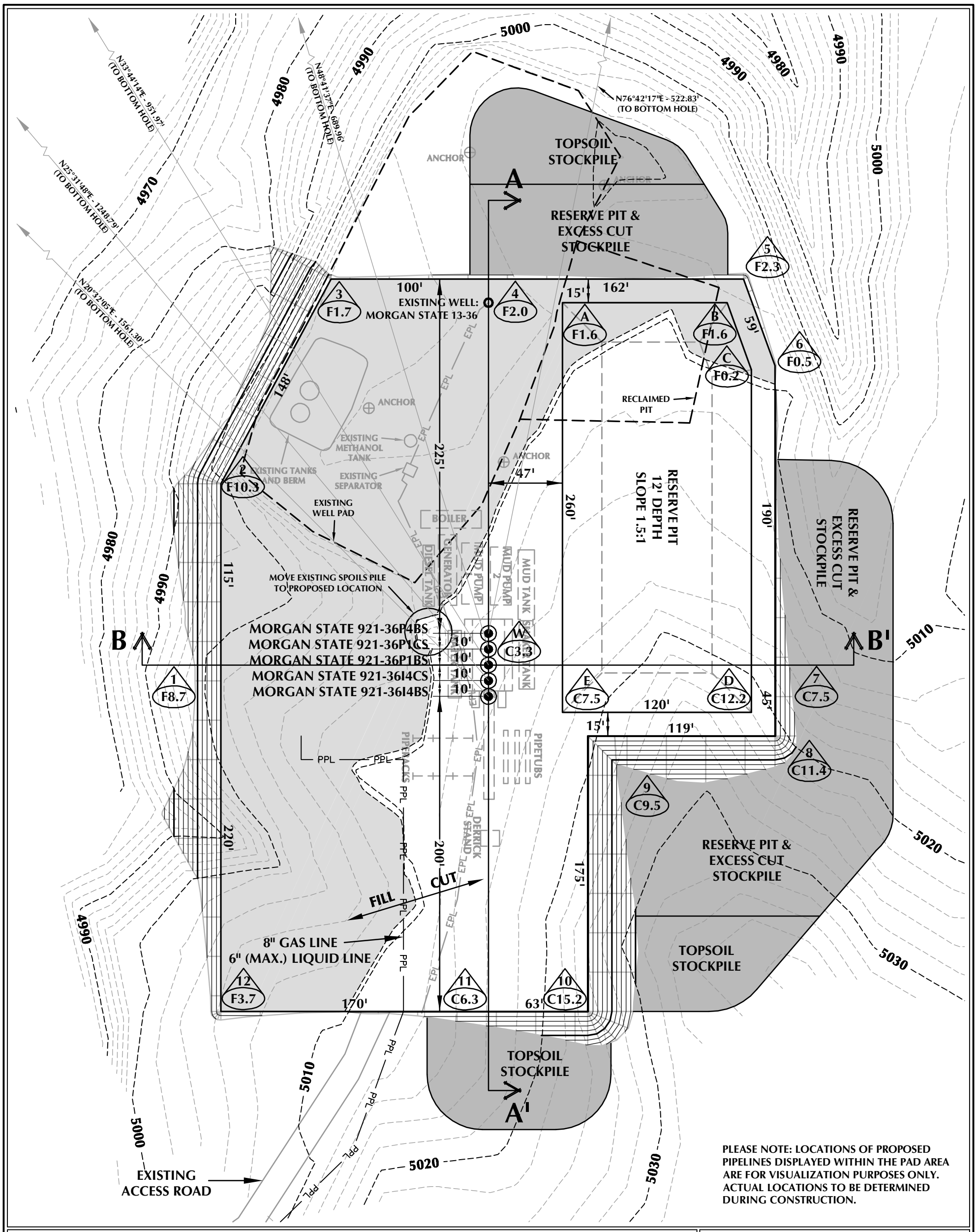
609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 10-17-11	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 11-3-11	DRAWN BY: C.T.C.	6 OF 17
SCALE: 1" = 60'	Date Last Revised:	

RECEIVED: December 21, 2011

API Well Number: 43047522520000



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - MORGAN STATE 921-36P DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5013.1'
FINISHED GRADE ELEVATION = 5009.8'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.66 ACRES
TOTAL DISTURBANCE AREA = 4.92 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,342 C.Y.
TOTAL FILL FOR WELL PAD = 11,793 C.Y.
TOPSOIL @ 6" DEPTH = 2,458 C.Y.
EXCESS MATERIAL = 1,549 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 10,920 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 41,910 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

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1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-36P

WELL PAD - LOCATION LAYOUT
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

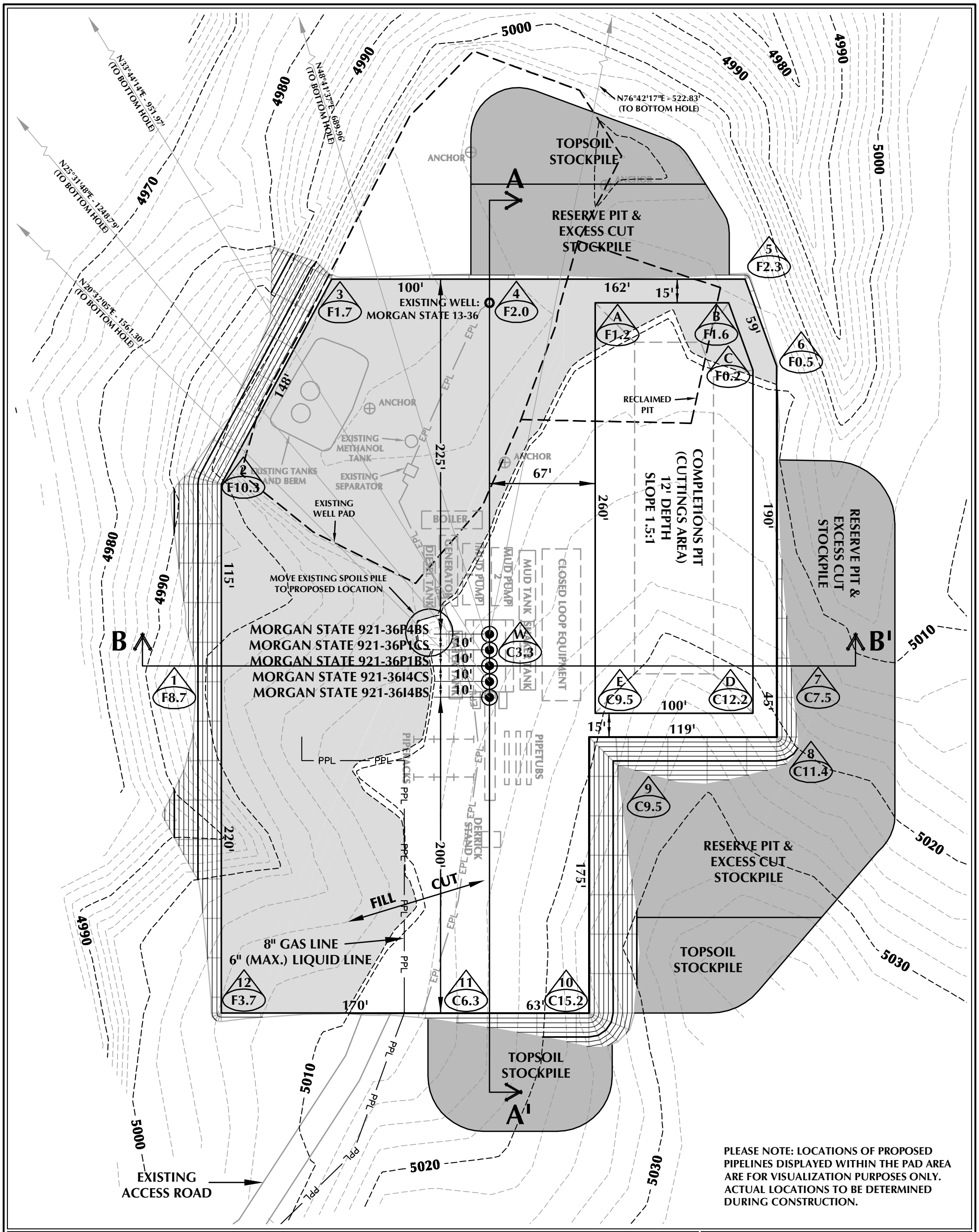
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 11/11/11 | SHEET NO: 7 7 OF 17
REVISED:

K:\ANADARKO\2011\2011_65_NBU_FOCUS_921-36\DWGS\MORGAN STATE 921-36P.dwg, 11/16/2011 8:24:51 PM, getty

RECEIVED: December 21, 2011

API Well Number: 43047522520000



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - MORGAN STATE 921-36P (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5013.1'
FINISHED GRADE ELEVATION = 5009.8'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.66 ACRES
TOTAL DISTURBANCE AREA = 4.92 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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1099 18th Street - Denver, Colorado 80202

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 13,342 C.Y.
TOTAL FILL FOR WELL PAD = 11,793 C.Y.
TOPSOIL @ 6" DEPTH = 2,458 C.Y.
EXCESS MATERIAL = 1,549 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 8,770 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 33,390 BARRELS

WELL PAD - MORGAN STATE 921-36P

WELL PAD - LOCATION LAYOUT
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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Sheridan, WY 82801
Phone 307-674-0609
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ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

WELL PAD LEGEND

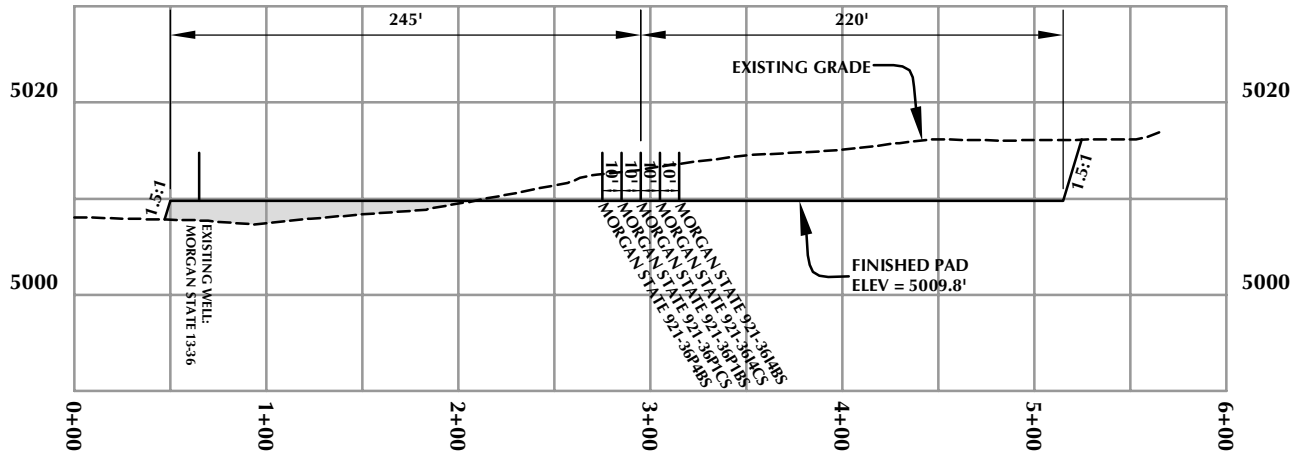
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

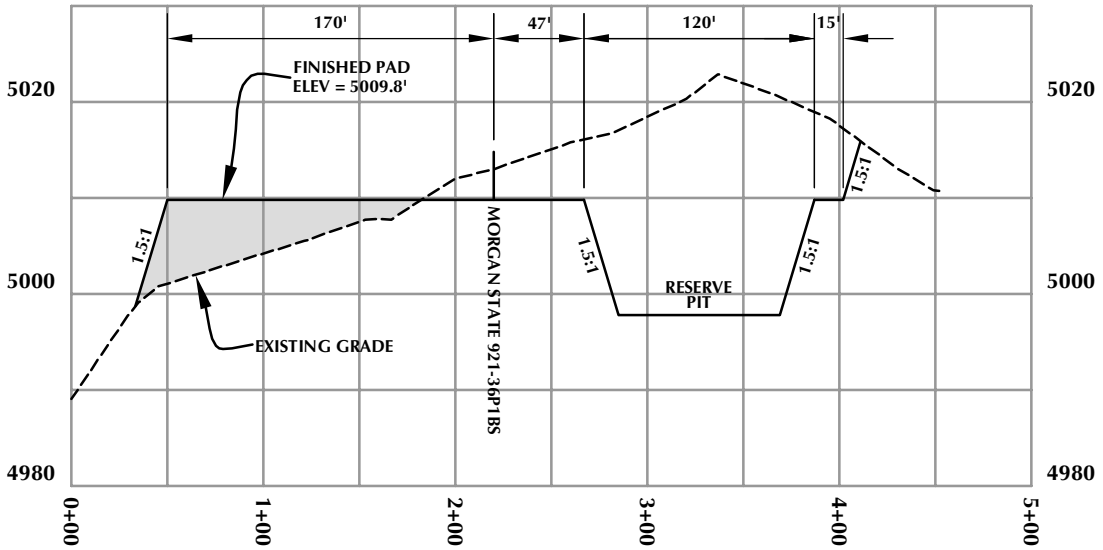
SCALE: 1"=60' | DATE: 11/15/11 | SHEET NO: 7B 7B OF 17
REVISED:

K:\ANADARKO\2011\2011_65_NBU_FOCUS_921-36\DWGS\MORGAN STATE 921-36P.dwg, 11/16/2011 8:23:13 PM, getty

RECEIVED: December 21, 2011



CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
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WELL PAD - MORGAN STATE 921-36P

WELL PAD - CROSS SECTIONS
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
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Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

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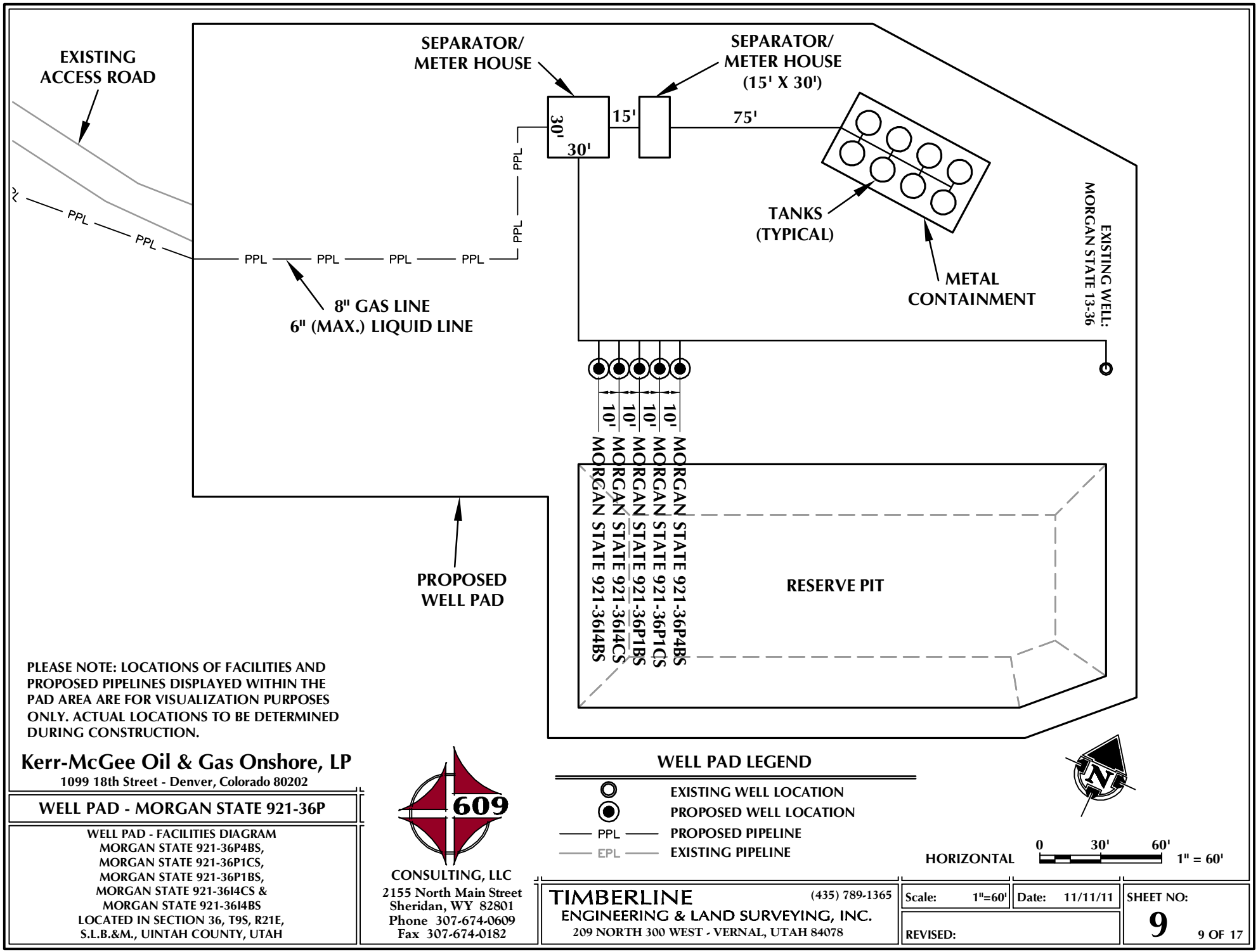
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100' | Date: 11/11/11 | SHEET NO: 8 8 OF 17
REVISED:

K:\ANADARKO\2011\2011_65_NBU_FOCUS_921-36\DWGS\MORGAN STATE 921-36P\MORGAN STATE 921-36P.dwg, 11/15/2011 11:35:23 PM, andy

API Well Number: 43047522520000



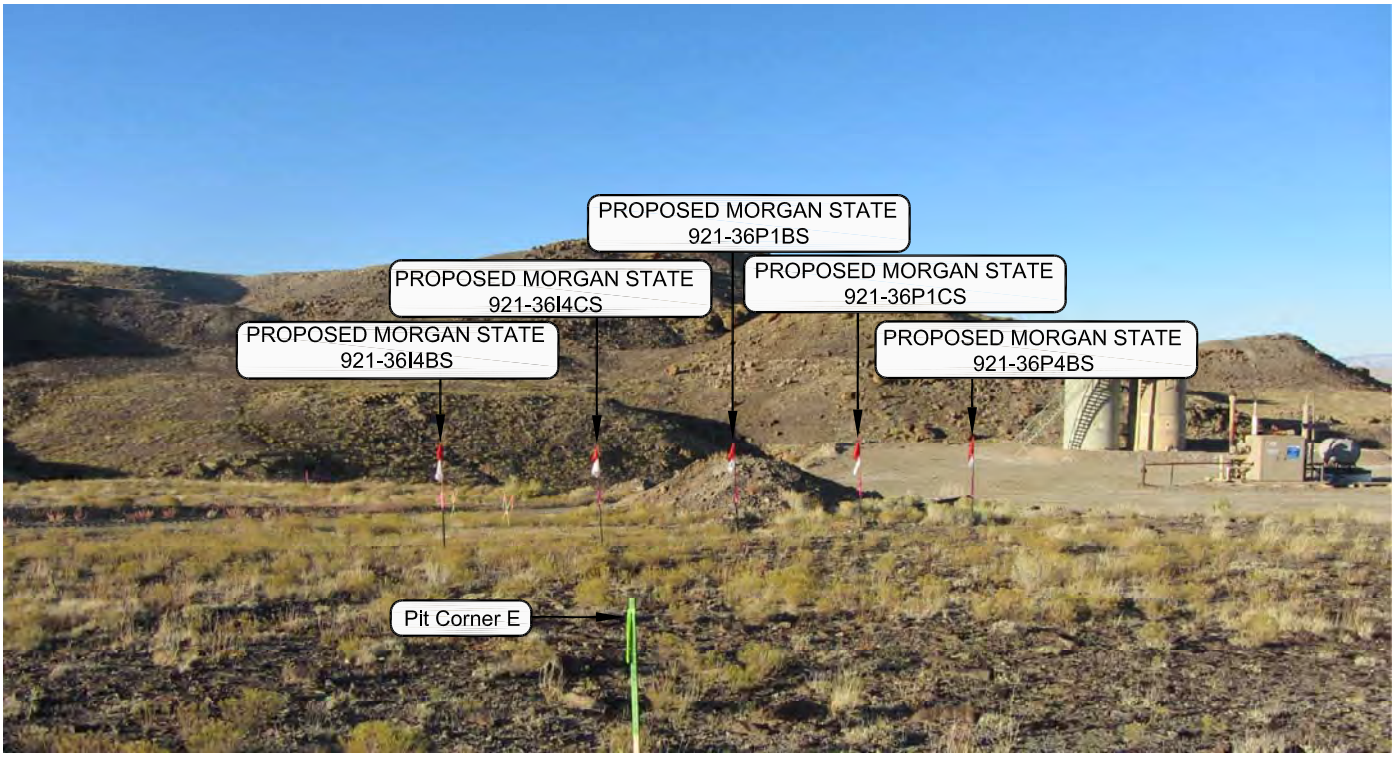


PHOTO VIEW: FROM PIT CORNER E TO LOCATION STAKE **CAMERA ANGLE: NORTHERLY**

PHOTO VIEW: EXISTING ACCESS ROAD **CAMERA ANGLE: EASTERLY**

Kerr-McGee Oil & Gas Onshore, LP
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WELL PAD - MORGAN STATE 921-36P

LOCATION PHOTOS
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS, MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS & MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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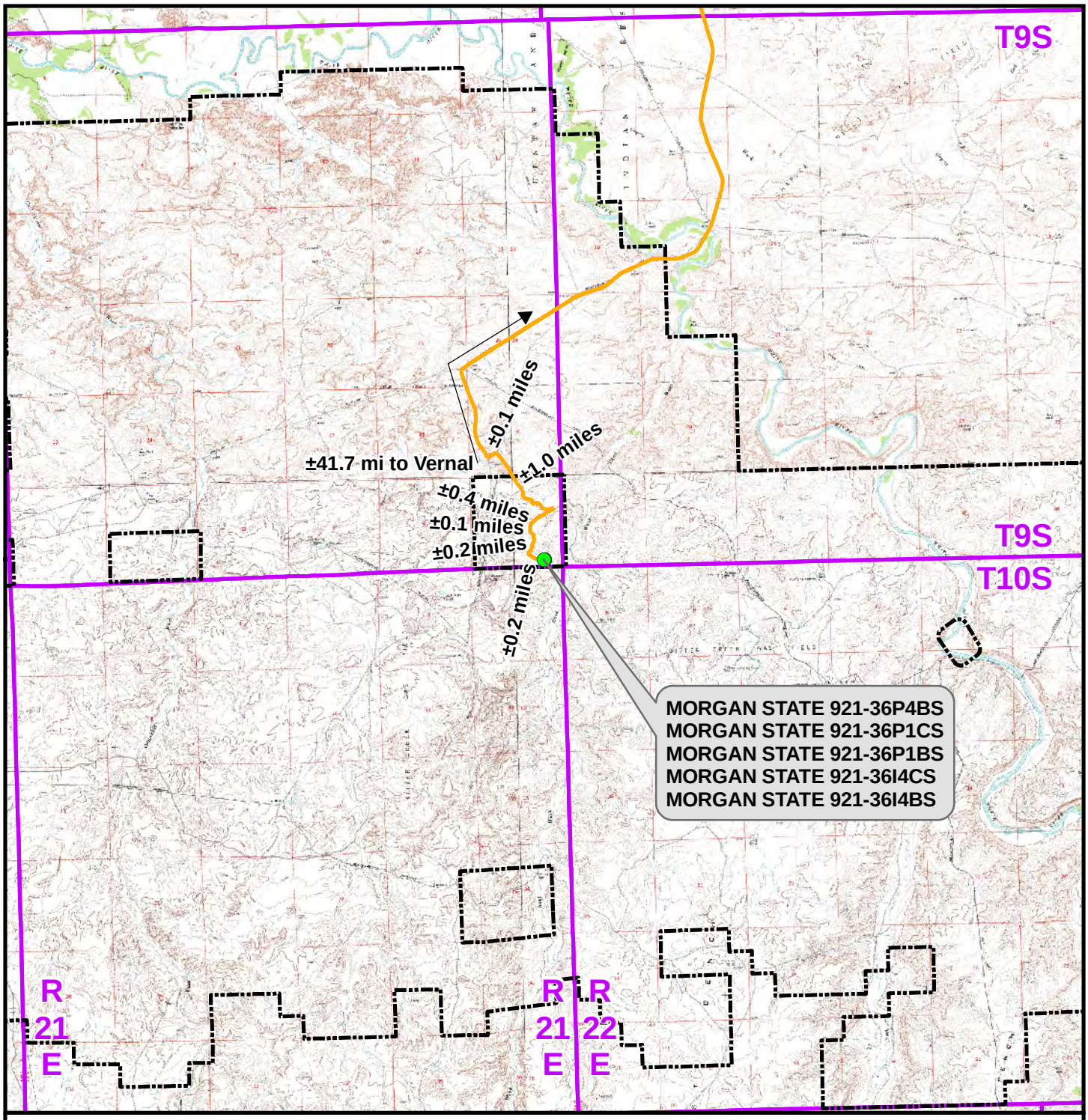
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 10-17-11	PHOTOS TAKEN BY: J.W.	SHEET NO: 10
DATE DRAWN: 11-3-11	DRAWN BY: C.T.C.	10 OF 17
Date Last Revised:		

RECEIVED: December 21, 2011

API Well Number: 43047522520000



Legend

Distance From Well Pad - MORGAN STATE 921-36P To Unit Boundary: ±431ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

WELL PAD - MORGAN STATE 921-36P

TOPO A
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

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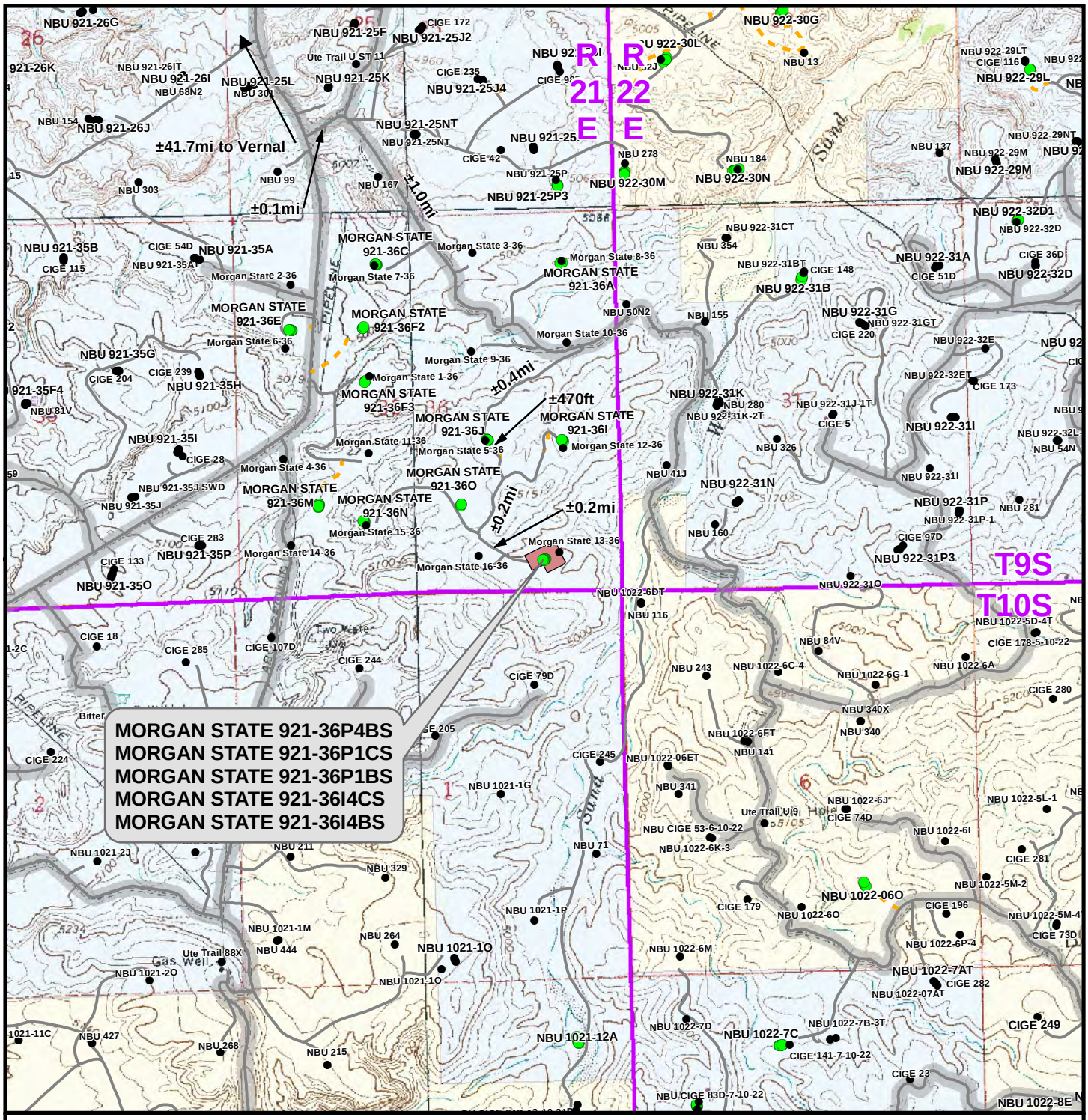
Fax 307-674-0182

N

SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 11
DRAWN: TL	DATE: 11 Nov 2011	11 OF 17
REVISED:	DATE:	

RECEIVED: December 21, 2011

API Well Number: 43047522520000



Legend

Total Proposed Road Length: ±0ft

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - MORGAN STATE 921-36P

TOPO B
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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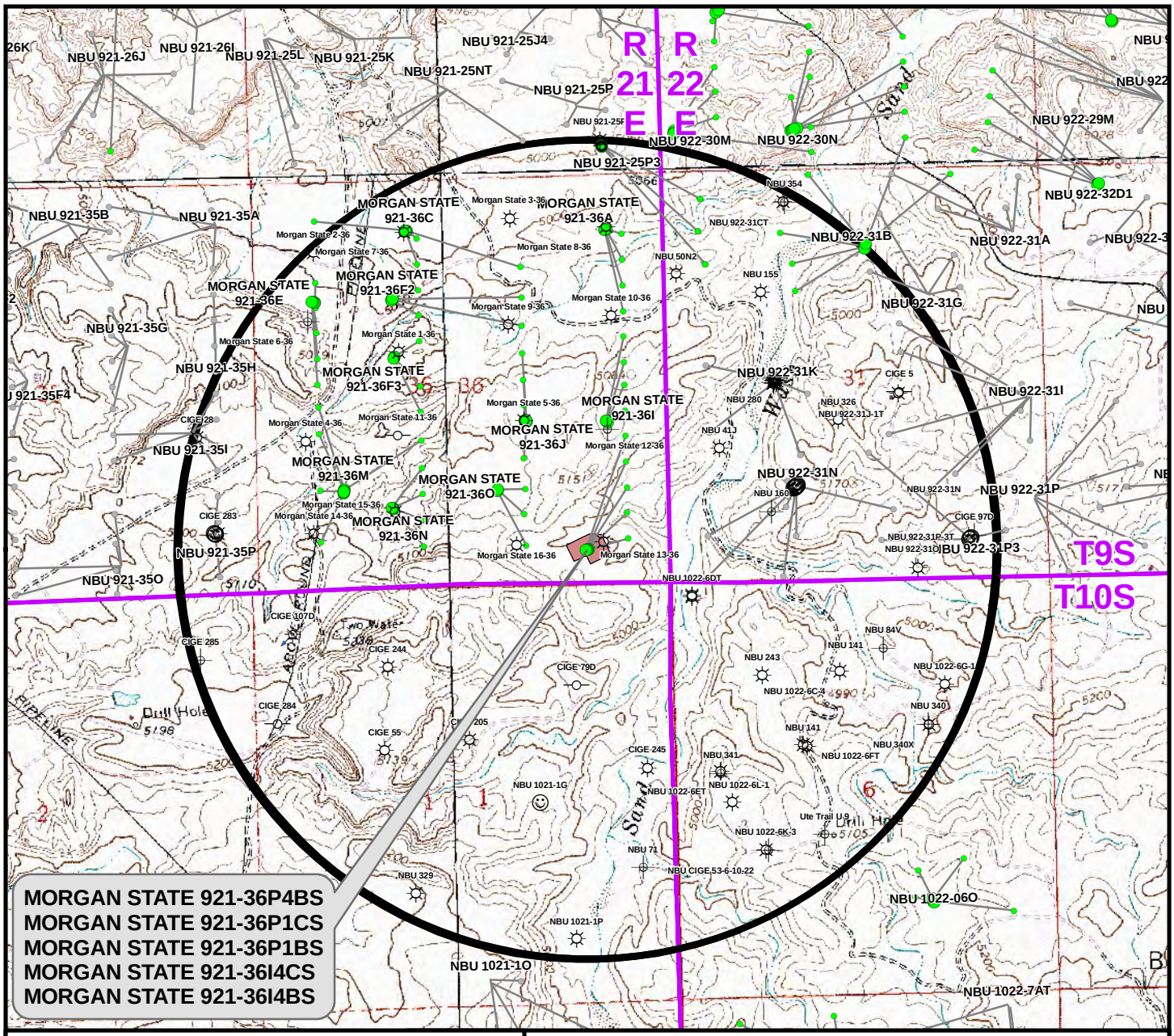
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 11 Nov 2011	12 OF 17
REVISED:	DATE:	

RECEIVED: December 21, 2011

API Well Number: 43047522520000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
MORGAN STATE 921-36P4BS	Morgan State 13-36	319ft
MORGAN STATE 921-36P1CS	Morgan State 13-36	483ft
MORGAN STATE 921-36P1BS	Morgan State 13-36	765ft
MORGAN STATE 921-36I4CS	Morgan State 12-36	480ft
MORGAN STATE 921-36I4BS	Morgan State 12-36	245ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - MORGAN STATE 921-36P

TOPO C
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
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Denver, Colorado 80202

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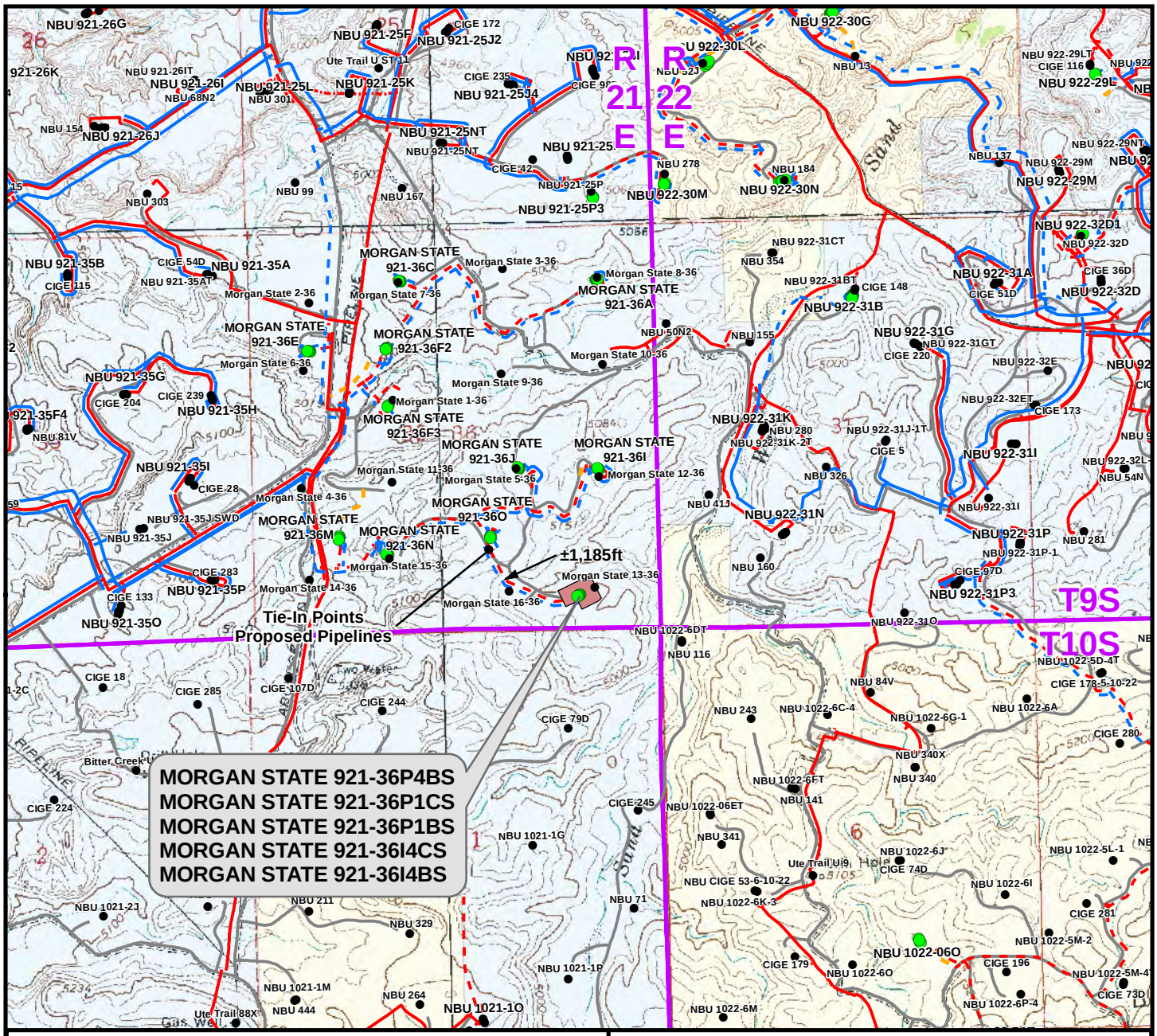
SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 11 Nov 2011	13 OF 17
REVISED:	DATE:	

RECEIVED: December 21, 2011



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad)	±255ft
Buried 6"(Max.) (Edge of Pad to 36O Intersection)	±1,185ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,440ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±255ft
Buried 8" (Edge of Pad to 36O Intersection)	±1,185ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,440ft

Legend

Well - Proposed; Well - Existing; Well Pad; Gas Pipeline - Proposed; Gas Pipeline - To Be Upgraded; Gas Pipeline - Existing; Liquid Pipeline - Proposed; Liquid Pipeline - Existing; Road - Proposed; Road - Existing; Bureau of Land Management; Indian Reservation; State; Private

WELL PAD - MORGAN STATE 921-36P

TOPO D
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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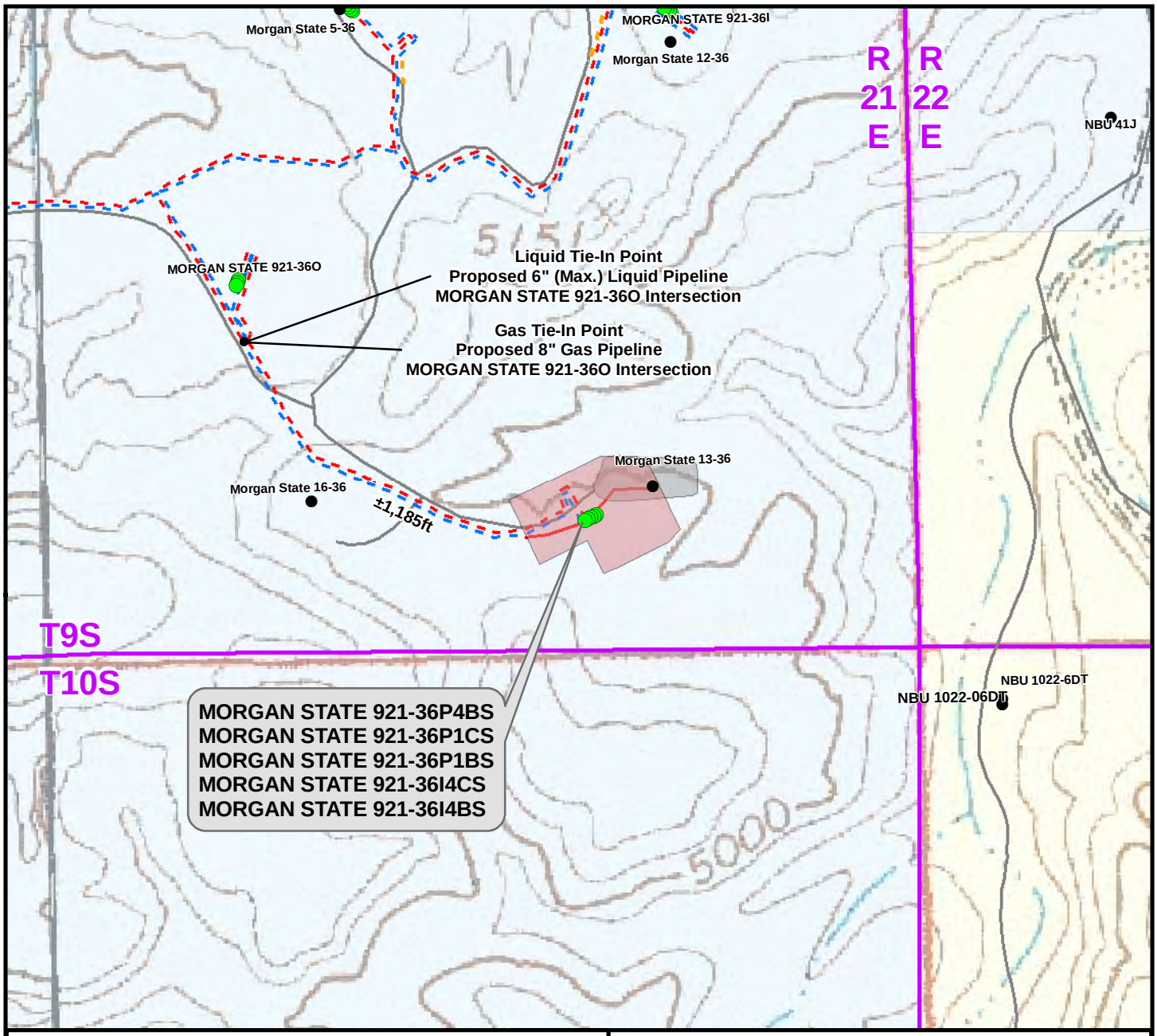
SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 14
DRAWN: TL	DATE: 11 Nov 2011	14 OF 17
REVISED:	DATE:	

RECEIVED: December 21, 2011

API Well Number: 43047522520000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad)	±255ft
Buried 6"(Max.) (Edge of Pad to 36O Intersection)	±1,185ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,440ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±255ft
Buried 8" (Edge of Pad to 36O Intersection)	±1,185ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,440ft

Legend

Well - Proposed; Well - Existing; Well Pad - Proposed; Well Pad - Existing; Gas Pipeline - Proposed; Gas Pipeline - To Be Upgraded; Gas Pipeline - Existing; Liquid Pipeline - Proposed; Liquid Pipeline - Existing; Road - Existing; Road - Proposed; Bureau of Land Management; Indian Reservation; State; Private

WELL PAD - MORGAN STATE 921-36P

TOPO D2 (PAD & PIPELINE DETAIL)
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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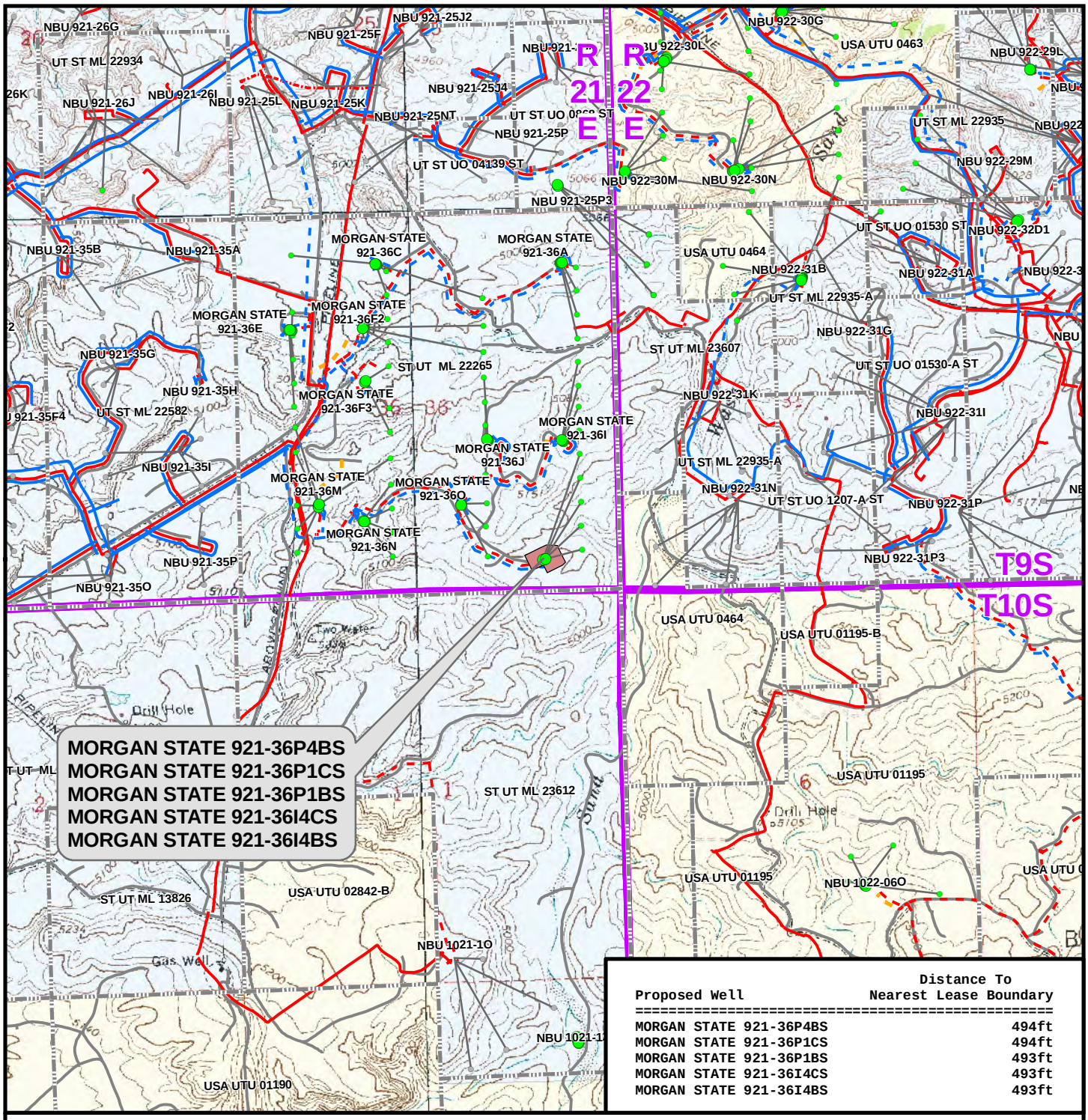
N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO: 15	
DRAWN: TL	DATE: 11 Nov 2011	15 OF 17	
REVISED:	DATE:		

RECEIVED: December 21, 2011

API Well Number: 43047522520000



Proposed Well	Distance To Nearest Lease Boundary
MORGAN STATE 921-36P4BS	494ft
MORGAN STATE 921-36P1CS	494ft
MORGAN STATE 921-36P1BS	493ft
MORGAN STATE 921-36I4CS	493ft
MORGAN STATE 921-36I4BS	493ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - MORGAN STATE 921-36P

TOPO E
MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS,
MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS &
MORGAN STATE 921-36I4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16
DRAWN: TL	DATE: 11 Nov 2011	16 OF 17
REVISED:	DATE:	

RECEIVED: December 21, 2011

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – MORGAN STATE 921-36P
WELLS – MORGAN STATE 921-36P4BS,
MORGAN STATE 921-36P1CS, MORGAN STATE 921-36P1BS,
MORGAN STATE 921-36I4CS & MORGAN STATE 921-36I4BS
Section 36, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.2 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 1.0 miles to a service road to the southwest. Exit right and proceed in a southwesterly direction approximately 0.4 miles to the proposed MORGAN STATE 921-36J well pad. Proceed in a southeasterly direction approximately 470 feet through the proposed MORGAN STATE 921-36J well pad to a second service road to the south. Proceed in a southerly direction along the second service road approximately 0.2 miles to a third service road to the southeast. Exit left and proceed in a southeasterly direction approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.7 miles in a southerly direction.

RECEIVED: December 21, 2011

API Well Number: 43047522520000

Scientific Drilling
Rocky Mountain Operations

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: MORGAN STATE 921-36P PAD
Well: MORGAN STATE 921-36P4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

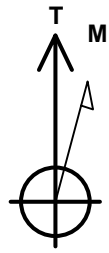
WELL DETAILS: MORGAN STATE 921-36P4BS

GL 5010 & KB 4 @ 5014.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14524732.11	2062399.53	39° 59' 11.778 N	109° 29' 36.805 W

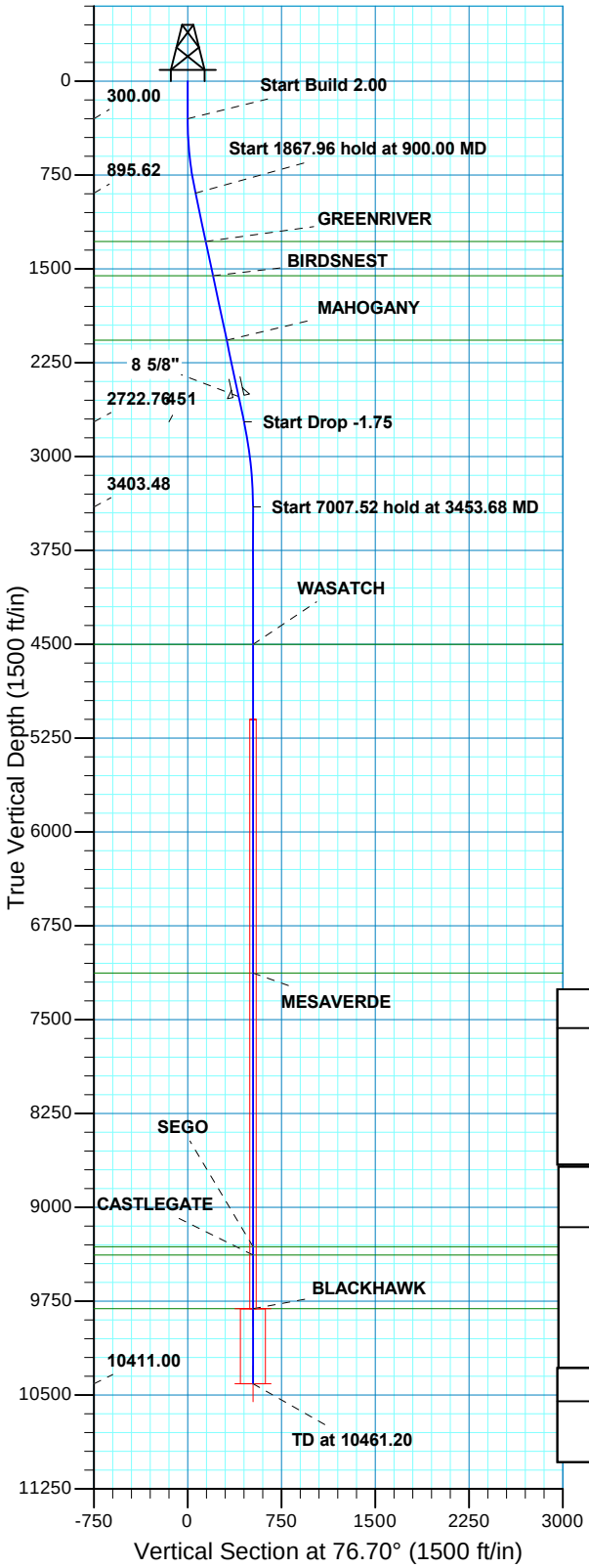
DESIGN TARGET DETAILS

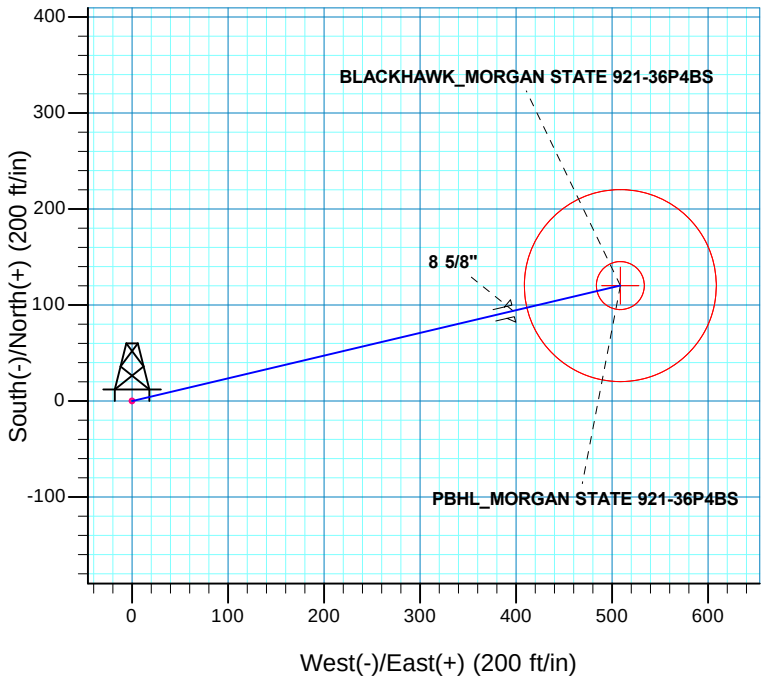
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BLACKHAWK	9811.00	120.19	508.51	14524860.88	2062905.94	39° 59' 12.966 N	109° 29' 30.271 W	Circle (Radius: 25.00)
	- plan hits target center							
PBHL	10411.00	120.19	508.51	14524860.88	2062905.94	39° 59' 12.966 N	109° 29' 30.271 W	Circle (Radius: 100.00)
	- plan hits target center							



Azimuths to True North
Magnetic North: 11.01°

Magnetic Field
Strength: 52275.2snT
Dip Angle: 65.85°
Date: 2011/12/05
Model: IGRF2010





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
900.00	12.00	76.70	895.62	14.40	60.92	2.00	76.70	62.60	
2767.96	12.00	76.70	2722.76	103.74	438.88	0.00	0.00	450.97	
3453.68	0.00	0.00	3403.48	120.19	508.51	1.75	180.00	522.52	
10461.20	0.00	0.00	10411.00	120.19	508.51	0.00	0.00	522.52	PBHL_MORGAN STATE 921-36P4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 36 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1282.00	1295.01	GREENRIVER
1556.00	1575.13	BIRDSNEST
2070.00	2100.61	MAHOGANY
4502.00	4552.20	WASATCH
7129.00	7179.20	MESAVERDE
9315.00	9365.20	SEGO
9382.00	9432.20	CASTLEGATE
9811.00	9861.20	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2520.00	2560.67	8 5/8"	8.625

RECEIVED:

Plan: PLAN #1 PRELIMINARY (MORGAN STATE 921-36P4BS/OH)
Created By: RobertScott Date: 10:19, December 05 2011

API Well Number: 43047522520000

Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
MORGAN STATE 921-36P PAD
MORGAN STATE 921-36P4BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

05 December, 2011

Anadarko Petroleum Corporation

RECEIVED: December 21, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Site:	MORGAN STATE 921-36P PAD	**North Reference:**	True
Well:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site MORGAN STATE 921-36P PAD, SECTION 36 T9S R21E

Site Position:		**Northing:**	14,524,714.74 usft	**Latitude:**	39° 59' 11.612 N
From:	Lat/Long	**Easting:**	2,062,363.40 usft	**Longitude:**	109° 29' 37.273 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.97 °

Well MORGAN STATE 921-36P4BS, 449 FSL 1003 FEL

Well Position	**+N/-S**	16.75 ft	**Northing:**	14,524,732.11 usft	**Latitude:**	39° 59' 11.778 N
	+E/-W	36.42 ft	**Easting:**	2,062,399.53 usft	**Longitude:**	109° 29' 36.805 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,010.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/12/05	11.01	65.85	52,275

Design PLAN #1 PRELIMINARY

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	76.70

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	12.00	76.70	895.62	14.40	60.92	2.00	2.00	0.00	76.70	
2,767.96	12.00	76.70	2,722.77	103.74	438.88	0.00	0.00	0.00	0.00	
3,453.68	0.00	0.00	3,403.48	120.19	508.51	1.75	-1.75	0.00	180.00	
10,461.20	0.00	0.00	10,411.00	120.19	508.51	0.00	0.00	0.00	0.00	PBHL_MORGAN ST/

RECEIVED: December 21, 2011

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Site:	MORGAN STATE 921-36P PAD	**North Reference:**	True
Well:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	76.70	399.98	0.40	1.70	1.75	2.00	2.00	0.00
500.00	4.00	76.70	499.84	1.61	6.79	6.98	2.00	2.00	0.00
600.00	6.00	76.70	599.45	3.61	15.27	15.69	2.00	2.00	0.00
700.00	8.00	76.70	698.70	6.41	27.13	27.88	2.00	2.00	0.00
800.00	10.00	76.70	797.47	10.01	42.36	43.52	2.00	2.00	0.00
900.00	12.00	76.70	895.62	14.40	60.92	62.60	2.00	2.00	0.00
Start 1867.96 hold at 900.00 MD									
1,000.00	12.00	76.70	993.44	19.18	81.16	83.39	0.00	0.00	0.00
1,100.00	12.00	76.70	1,091.25	23.97	101.39	104.18	0.00	0.00	0.00
1,200.00	12.00	76.70	1,189.07	28.75	121.62	124.98	0.00	0.00	0.00
1,295.01	12.00	76.70	1,282.00	33.29	140.85	144.73	0.00	0.00	0.00
GREENRIVER									
1,300.00	12.00	76.70	1,286.88	33.53	141.86	145.77	0.00	0.00	0.00
1,400.00	12.00	76.70	1,384.70	38.31	162.09	166.56	0.00	0.00	0.00
1,500.00	12.00	76.70	1,482.51	43.10	182.33	187.35	0.00	0.00	0.00
1,575.13	12.00	76.70	1,556.00	46.69	197.53	202.97	0.00	0.00	0.00
BIRDSNEST									
1,600.00	12.00	76.70	1,580.33	47.88	202.56	208.14	0.00	0.00	0.00
1,700.00	12.00	76.70	1,678.14	52.66	222.79	228.93	0.00	0.00	0.00
1,800.00	12.00	76.70	1,775.96	57.44	243.03	249.72	0.00	0.00	0.00
1,900.00	12.00	76.70	1,873.77	62.23	263.26	270.51	0.00	0.00	0.00
2,000.00	12.00	76.70	1,971.59	67.01	283.49	291.31	0.00	0.00	0.00
2,100.00	12.00	76.70	2,069.40	71.79	303.73	312.10	0.00	0.00	0.00
2,100.61	12.00	76.70	2,070.00	71.82	303.85	312.22	0.00	0.00	0.00
MAHOGANY									
2,200.00	12.00	76.70	2,167.22	76.57	323.96	332.89	0.00	0.00	0.00
2,300.00	12.00	76.70	2,265.03	81.36	344.19	353.68	0.00	0.00	0.00
2,400.00	12.00	76.70	2,362.84	86.14	364.43	374.47	0.00	0.00	0.00
2,500.00	12.00	76.70	2,460.66	90.92	384.66	395.26	0.00	0.00	0.00
2,560.67	12.00	76.70	2,520.00	93.82	396.94	407.87	0.00	0.00	0.00
8 5/8"									
2,600.00	12.00	76.70	2,558.47	95.70	404.90	416.05	0.00	0.00	0.00
2,700.00	12.00	76.70	2,656.29	100.49	425.13	436.84	0.00	0.00	0.00
2,767.96	12.00	76.70	2,722.77	103.74	438.88	450.97	0.00	0.00	0.00
Start Drop -1.75									
2,800.00	11.44	76.70	2,754.14	105.23	445.21	457.48	1.75	-1.75	0.00
2,900.00	9.69	76.70	2,852.44	109.45	463.06	475.81	1.75	-1.75	0.00
3,000.00	7.94	76.70	2,951.25	112.97	477.97	491.14	1.75	-1.75	0.00
3,100.00	6.19	76.70	3,050.49	115.80	489.94	503.44	1.75	-1.75	0.00
3,200.00	4.44	76.70	3,150.06	117.93	498.95	512.70	1.75	-1.75	0.00
3,300.00	2.69	76.70	3,249.86	119.36	505.00	518.91	1.75	-1.75	0.00
3,400.00	0.94	76.70	3,349.80	120.09	508.08	522.08	1.75	-1.75	0.00
3,453.68	0.00	0.00	3,403.48	120.19	508.51	522.52	1.75	-1.75	0.00
Start 7007.52 hold at 3453.68 MD									
3,500.00	0.00	0.00	3,449.80	120.19	508.51	522.52	0.00	0.00	0.00
3,600.00	0.00	0.00	3,549.80	120.19	508.51	522.52	0.00	0.00	0.00
3,700.00	0.00	0.00	3,649.80	120.19	508.51	522.52	0.00	0.00	0.00
3,800.00	0.00	0.00	3,749.80	120.19	508.51	522.52	0.00	0.00	0.00

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

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Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Site:	MORGAN STATE 921-36P PAD	**North Reference:**	True
Well:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,849.80	120.19	508.51	522.52	0.00	0.00	0.00
4,000.00	0.00	0.00	3,949.80	120.19	508.51	522.52	0.00	0.00	0.00
4,100.00	0.00	0.00	4,049.80	120.19	508.51	522.52	0.00	0.00	0.00
4,200.00	0.00	0.00	4,149.80	120.19	508.51	522.52	0.00	0.00	0.00
4,300.00	0.00	0.00	4,249.80	120.19	508.51	522.52	0.00	0.00	0.00
4,400.00	0.00	0.00	4,349.80	120.19	508.51	522.52	0.00	0.00	0.00
4,500.00	0.00	0.00	4,449.80	120.19	508.51	522.52	0.00	0.00	0.00
4,552.20	0.00	0.00	4,502.00	120.19	508.51	522.52	0.00	0.00	0.00
WASATCH									
4,600.00	0.00	0.00	4,549.80	120.19	508.51	522.52	0.00	0.00	0.00
4,700.00	0.00	0.00	4,649.80	120.19	508.51	522.52	0.00	0.00	0.00
4,800.00	0.00	0.00	4,749.80	120.19	508.51	522.52	0.00	0.00	0.00
4,900.00	0.00	0.00	4,849.80	120.19	508.51	522.52	0.00	0.00	0.00
5,000.00	0.00	0.00	4,949.80	120.19	508.51	522.52	0.00	0.00	0.00
5,100.00	0.00	0.00	5,049.80	120.19	508.51	522.52	0.00	0.00	0.00
5,200.00	0.00	0.00	5,149.80	120.19	508.51	522.52	0.00	0.00	0.00
5,300.00	0.00	0.00	5,249.80	120.19	508.51	522.52	0.00	0.00	0.00
5,400.00	0.00	0.00	5,349.80	120.19	508.51	522.52	0.00	0.00	0.00
5,500.00	0.00	0.00	5,449.80	120.19	508.51	522.52	0.00	0.00	0.00
5,600.00	0.00	0.00	5,549.80	120.19	508.51	522.52	0.00	0.00	0.00
5,700.00	0.00	0.00	5,649.80	120.19	508.51	522.52	0.00	0.00	0.00
5,800.00	0.00	0.00	5,749.80	120.19	508.51	522.52	0.00	0.00	0.00
5,900.00	0.00	0.00	5,849.80	120.19	508.51	522.52	0.00	0.00	0.00
6,000.00	0.00	0.00	5,949.80	120.19	508.51	522.52	0.00	0.00	0.00
6,100.00	0.00	0.00	6,049.80	120.19	508.51	522.52	0.00	0.00	0.00
6,200.00	0.00	0.00	6,149.80	120.19	508.51	522.52	0.00	0.00	0.00
6,300.00	0.00	0.00	6,249.80	120.19	508.51	522.52	0.00	0.00	0.00
6,400.00	0.00	0.00	6,349.80	120.19	508.51	522.52	0.00	0.00	0.00
6,500.00	0.00	0.00	6,449.80	120.19	508.51	522.52	0.00	0.00	0.00
6,600.00	0.00	0.00	6,549.80	120.19	508.51	522.52	0.00	0.00	0.00
6,700.00	0.00	0.00	6,649.80	120.19	508.51	522.52	0.00	0.00	0.00
6,800.00	0.00	0.00	6,749.80	120.19	508.51	522.52	0.00	0.00	0.00
6,900.00	0.00	0.00	6,849.80	120.19	508.51	522.52	0.00	0.00	0.00
7,000.00	0.00	0.00	6,949.80	120.19	508.51	522.52	0.00	0.00	0.00
7,100.00	0.00	0.00	7,049.80	120.19	508.51	522.52	0.00	0.00	0.00
7,179.20	0.00	0.00	7,129.00	120.19	508.51	522.52	0.00	0.00	0.00
MESAVERDE									
7,200.00	0.00	0.00	7,149.80	120.19	508.51	522.52	0.00	0.00	0.00
7,300.00	0.00	0.00	7,249.80	120.19	508.51	522.52	0.00	0.00	0.00
7,400.00	0.00	0.00	7,349.80	120.19	508.51	522.52	0.00	0.00	0.00
7,500.00	0.00	0.00	7,449.80	120.19	508.51	522.52	0.00	0.00	0.00
7,600.00	0.00	0.00	7,549.80	120.19	508.51	522.52	0.00	0.00	0.00
7,700.00	0.00	0.00	7,649.80	120.19	508.51	522.52	0.00	0.00	0.00
7,800.00	0.00	0.00	7,749.80	120.19	508.51	522.52	0.00	0.00	0.00
7,900.00	0.00	0.00	7,849.80	120.19	508.51	522.52	0.00	0.00	0.00
8,000.00	0.00	0.00	7,949.80	120.19	508.51	522.52	0.00	0.00	0.00
8,100.00	0.00	0.00	8,049.80	120.19	508.51	522.52	0.00	0.00	0.00
8,200.00	0.00	0.00	8,149.80	120.19	508.51	522.52	0.00	0.00	0.00
8,300.00	0.00	0.00	8,249.80	120.19	508.51	522.52	0.00	0.00	0.00
8,400.00	0.00	0.00	8,349.80	120.19	508.51	522.52	0.00	0.00	0.00
8,500.00	0.00	0.00	8,449.80	120.19	508.51	522.52	0.00	0.00	0.00
8,600.00	0.00	0.00	8,549.80	120.19	508.51	522.52	0.00	0.00	0.00
8,700.00	0.00	0.00	8,649.80	120.19	508.51	522.52	0.00	0.00	0.00
8,800.00	0.00	0.00	8,749.80	120.19	508.51	522.52	0.00	0.00	0.00

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Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Site:	MORGAN STATE 921-36P PAD	**North Reference:**	True
Well:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,849.80	120.19	508.51	522.52	0.00	0.00	0.00
9,000.00	0.00	0.00	8,949.80	120.19	508.51	522.52	0.00	0.00	0.00
9,100.00	0.00	0.00	9,049.80	120.19	508.51	522.52	0.00	0.00	0.00
9,200.00	0.00	0.00	9,149.80	120.19	508.51	522.52	0.00	0.00	0.00
9,300.00	0.00	0.00	9,249.80	120.19	508.51	522.52	0.00	0.00	0.00
9,365.20	0.00	0.00	9,315.00	120.19	508.51	522.52	0.00	0.00	0.00
SEGO									
9,400.00	0.00	0.00	9,349.80	120.19	508.51	522.52	0.00	0.00	0.00
9,432.20	0.00	0.00	9,382.00	120.19	508.51	522.52	0.00	0.00	0.00
CASTLEGATE									
9,500.00	0.00	0.00	9,449.80	120.19	508.51	522.52	0.00	0.00	0.00
9,600.00	0.00	0.00	9,549.80	120.19	508.51	522.52	0.00	0.00	0.00
9,700.00	0.00	0.00	9,649.80	120.19	508.51	522.52	0.00	0.00	0.00
9,800.00	0.00	0.00	9,749.80	120.19	508.51	522.52	0.00	0.00	0.00
9,861.20	0.00	0.00	9,811.00	120.19	508.51	522.52	0.00	0.00	0.00
BLACKHAWK - BLACKHAWK_MORGAN STATE 921-36P4BS									
9,900.00	0.00	0.00	9,849.80	120.19	508.51	522.52	0.00	0.00	0.00
10,000.00	0.00	0.00	9,949.80	120.19	508.51	522.52	0.00	0.00	0.00
10,100.00	0.00	0.00	10,049.80	120.19	508.51	522.52	0.00	0.00	0.00
10,200.00	0.00	0.00	10,149.80	120.19	508.51	522.52	0.00	0.00	0.00
10,300.00	0.00	0.00	10,249.80	120.19	508.51	522.52	0.00	0.00	0.00
10,400.00	0.00	0.00	10,349.80	120.19	508.51	522.52	0.00	0.00	0.00
10,461.20	0.00	0.00	10,411.00	120.19	508.51	522.52	0.00	0.00	0.00
TD at 10461.20 - PBHL_MORGAN STATE 921-36P4BS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BLACKHAWK_MORGAI - plan hits target center - Circle (radius 25.00)	0.00	0.00	9,811.00	120.19	508.51	14,524,860.88	2,062,905.93	39° 59' 12.966 N	109° 29' 30.271 W
PBHL_MORGAN STATI - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,411.00	120.19	508.51	14,524,860.88	2,062,905.93	39° 59' 12.966 N	109° 29' 30.271 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,560.67	2,520.00	8 5/8"	8.625	11.000

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Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	GL 5010 & KB 4 @ 5014.00ft (ASSUMED)
Site:	MORGAN STATE 921-36P PAD	**North Reference:**	True
Well:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,295.01	1,282.00	GREENRIVER			
1,575.13	1,556.00	BIRDSNEST			
2,100.61	2,070.00	MAHOGANY			
4,552.20	4,502.00	WASATCH			
7,179.20	7,129.00	MESAVERDE			
9,365.20	9,315.00	SEGO			
9,432.20	9,382.00	CASTLEGATE			
9,861.20	9,811.00	BLACKHAWK			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
900.00	895.62	14.40	60.92	Start 1867.96 hold at 900.00 MD
2,767.96	2,722.77	103.74	438.88	Start Drop -1.75
3,453.68	3,403.48	120.19	508.51	Start 7007.52 hold at 3453.68 MD
10,461.20	10,411.00	120.19	508.51	TD at 10461.20

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MORGAN STATE 921-36I4BS

Surface:	431 FSL / 1039 FEL	SESE	Lot 4
BHL:	1905 FSL / 493 FEL	NESE	Lot

MORGAN STATE 921-36I4CS

Surface:	436 FSL / 1030 FEL	SESE	Lot 4
BHL:	1574 FSL / 493 FEL	NESE	Lot

MORGAN STATE 921-36P1BS

Surface:	440 FSL / 1021 FEL	SESE	Lot 4
BHL:	1243 FSL / 493 FEL	SESE	Lot 4

MORGAN STATE 921-36P1CS

Surface:	444 FSL / 1012 FEL	SESE	Lot 4
BHL:	911 FSL / 494 FEL	SESE	Lot 4

MORGAN STATE 921-36P4BS

Surface:	449 FSL / 1003 FEL	SESE	Lot 4
BHL:	580 FSL / 494 FEL	SESE	Lot 4

Pad: MORGAN STATE 921-36P PAD
Section 36 T9S R21E
Mineral Lease: ML-22265

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

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A. Existing Roads:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed. (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the Morgan State 13-36. The Morgan State 13-36 well location is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of December 5, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is ±1,440' and the individual segments are broken up as follows:

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±255' (0.05 miles) –New 8" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
±1,185' (0.2 miles) –New 8" buried gas pipeline from the edge of pad to the 921-36O intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,440'and the individual segments are broken up as follows:

±255' (0.05 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
±1,185' (0.2 miles) –New 6" buried liquid pipeline from the edge of pad to the 921-36O intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum

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trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

Any additional pits necessary for subsequent operations, such as temporary flare pits, or workover pits, will contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of the work.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs “Reporting Oil and Gas Undesirable Events” rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/ egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/

completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

L. Other Information:

None

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M. Lessee's or Operators' Representative & Certification:

Danielle Piernot
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

December 19, 2011
Date

Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779

December 14, 2011

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
Morgan State 921-36P4BS
T9S-R21E
Section 36: SESE (Surface), SESE (Bottom Hole)
Surface: 449' FSL, 1003' FEL
Bottom Hole: 580' FSL, 494' FEL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.

- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Joe Matney
Sr. Staff Landman

RECEIVED: December 21, 2011

Kerr-McGee Oil & Gas Onshore LP
1999 Broadway, Suite 3700
Denver, CO 80205

December 9, 2011

Mrs. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

RE: Exception Location Request
Morgan State 921-36P4BS
T9S-R21E
Section 36: SESE
Surface: 449' FSL, 1003' FEL
Bottom Hole: 580' FSL, 494' FEL
Uintah County, Utah

Dear Mrs. Mason:

Kerr-McGee Oil & Gas Onshore LP has submitted a permit to drill the captioned well to test the Wasatch formation and Mesaverde group. The well is located within the area covered by Cause No. 173-24 which requires that the well be no closer than 460' to any exterior boundary of a committed tract of the Natural Buttes Unit. The surface location for this well is less than 460' from the exterior boundary of a committed tract of the Natural Buttes Unit due to the fact that we are expanding an existing location in order to minimize surface disturbance, and have a limited amount of topographically acceptable surface to utilize. The bottom hole location (and producing zones) for this well will be outside the 460' unit boundary setback. Kerr-McGee owns 100% of the leasehold in the offset lands and has no objection to the exception location.

Kerr-McGee requests your approval of this exception location request. If you have any questions or require any additional information, please do not hesitate to call me at 720-929-6147.

Sincerely,

Joe Matney

Joe Matney
Senior Staff Landman

RECEIVED: December 21, 2011

From: Jim Davis
To: APD APPROVAL
CC: Danielle Piernot; Julie Jacobson
Date: 2/23/2012 3:22 PM
Subject: APD Approval: the Kerr McGee Morgan State wells

The following wells have been approved by SITLA including arch and paleo clearance.

4304752246	Morgan State 921-36G4BS
4304752253	Morgan State 921-36G4CS
4304752255	Morgan State 921-36J1CS
4304752256	Morgan State 921-36J4BS
4304752281	Morgan State 921-36F1BS
4304752282	Morgan State 921-36F1CS
4304752283	Morgan State 921-36G1BS
4304752284	Morgan State 921-36G1CS
4304752285	Morgan State 921-36F4BS
4304752286	Morgan State 921-36K1BS
4304752287	Morgan State 921-36K1CS
4304752247	Morgan State 921-36P1BS
4304752248	Morgan State 921-36P1CS
4304752249	Morgan State 921-36I4BS
4304752250	Morgan State 921-36I4CS
4304752252	Morgan State 921-36P4BS
4304752263	Morgan State 921-36K4CS
4304752264	Morgan State 921-36N1BS
4304752265	Morgan State 921-36N1CS
4304752266	Morgan State 921-36N4BS
4304752276	Morgan State 921-36D4CS
4304752277	Morgan State 921-36E1BS
4304752278	Morgan State 921-36E1CS
4304752279	Morgan State 921-36E4BS
4304752280	Morgan State 921-36E4CS
4304752245	Morgan State 921-36O4CS
4304752254	Morgan State 921-36O1CS
4304752267	Morgan State 921-36O1BS
4304752257	Morgan State 921-36K4BS
4304752258	Morgan State 921-36L1BS
4304752259	Morgan State 921-36L1CS
4304752260	Morgan State 921-36M1BS
4304752261	Morgan State 921-36M1CS
4304752262	Morgan State 921-36M4BS
4304752272	Morgan State 921-36B4CS
4304752273	Morgan State 921-36C4BS
4304752274	Morgan State 921-36C4CS
4304752275	Morgan State 921-36D1CS

There are eight more wells on two pads in this section, the 36A pad and the 36I pad, that have not yet been approved. Anadarko is gathering reclamation cost figures on pads similar to those as part of the process of acquiring adequate SITLA bonds.
-Jim

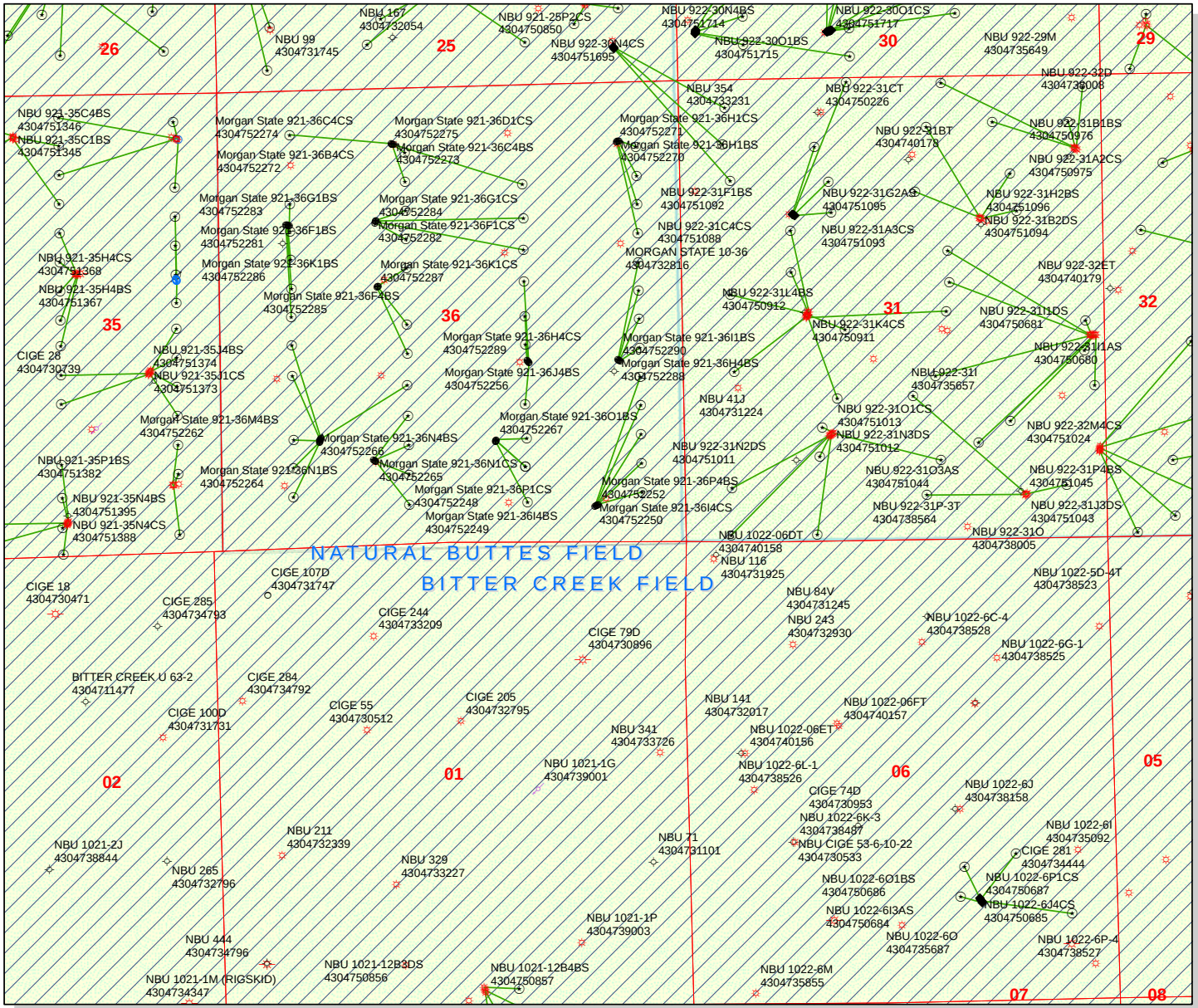
Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov

RECEIVED: February 23, 2012

Phone: (801) 538-5156

RECEIVED: February 23, 2012

API Well Number: 43047522520000



API Number: 4304752252

Well Name: Morgan State 921-36P4BS

Township T0.9 . Range R2.1 . Section 36

Meridian: SLBM

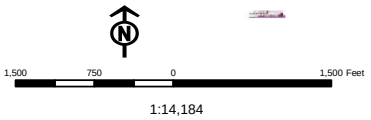
Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

Wells Query
Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well



1:14,184

RECEIVED: February 24, 2012

API Well Number: 43047522520000

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36P4BS 43047522520000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36P4BS 4			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2480	10411		
Previous Shoe Setting Depth (TVD)	0	2480		
Max Mud Weight (ppg)	8.4	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	6871	12.7		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	1083		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	785	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	537	NO	Reasonable depth in area
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	537	NO	
Required Casing/BOPE Test Pressure=		2373	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi	*Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	7038		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5789	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4748	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5293	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2480	psi	*Assumes 1psi/ft frac gradient

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi	*Assumes 1psi/ft frac gradient

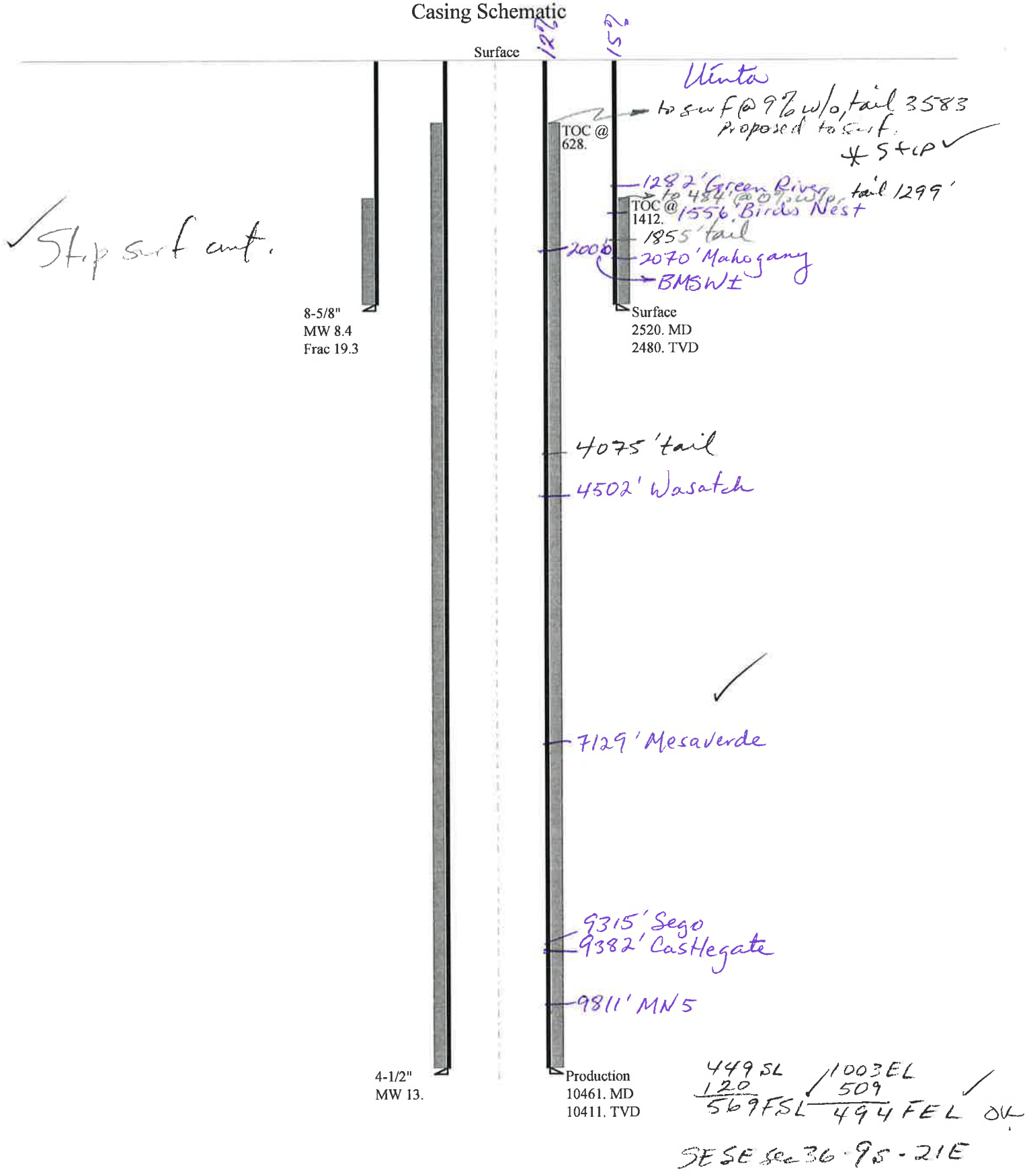
Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi	*Assumes 1psi/ft frac gradient

RECEIVED: February 28, 2012

API Well Number: 43047522520000

43047522520000 Morgan State 921-36P4BS

Casing Schematic



Well name:	**43047522520000 Morgan State 921-36P4BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-52252
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 2,183 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,480 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,206 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 109 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,412 ft

Directional Info - Build & Drop
Kick-off point 300 ft
Departure at shoe: 399 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 12 °

Re subsequent strings:
Next setting depth: 10,411 ft
Next mud weight: 13.000 ppg
Next setting BHP: 7,031 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,480 ft
Injection pressure: 2,480 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	2520	8.625	28.00	I-55	LT&C	2480	2520	7.892	99792

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1082	1880	1.737	2480	3390	1.37	69.4	348	5.01 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: February 23,2012
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2480 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43047522520000 Morgan State 921-36P4BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-52252
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 13.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 4,740 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 7,031 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on air weight.
Neutral point: 8,438 ft

Estimated cost: 158,311 ($)

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 220 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 628 ft

Directional Info - Build & Drop
Kick-off point 300 ft
Departure at shoe: 522 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
2	5000	4.5	11.60	HCP-110	DQX	4950	5000	3.875	132000
1	5461	4.5	11.60	HCP-110	LT&C	10411	10461	3.875	26311

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	3343	8141	2.435	5829	10690	1.83	120.8	367.2	3.04 B
1	7031	8650	1.230	7031	10690	1.52	63.3	279	4.40 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: February 23,2012
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 10411 ft, a mud weight of 13 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

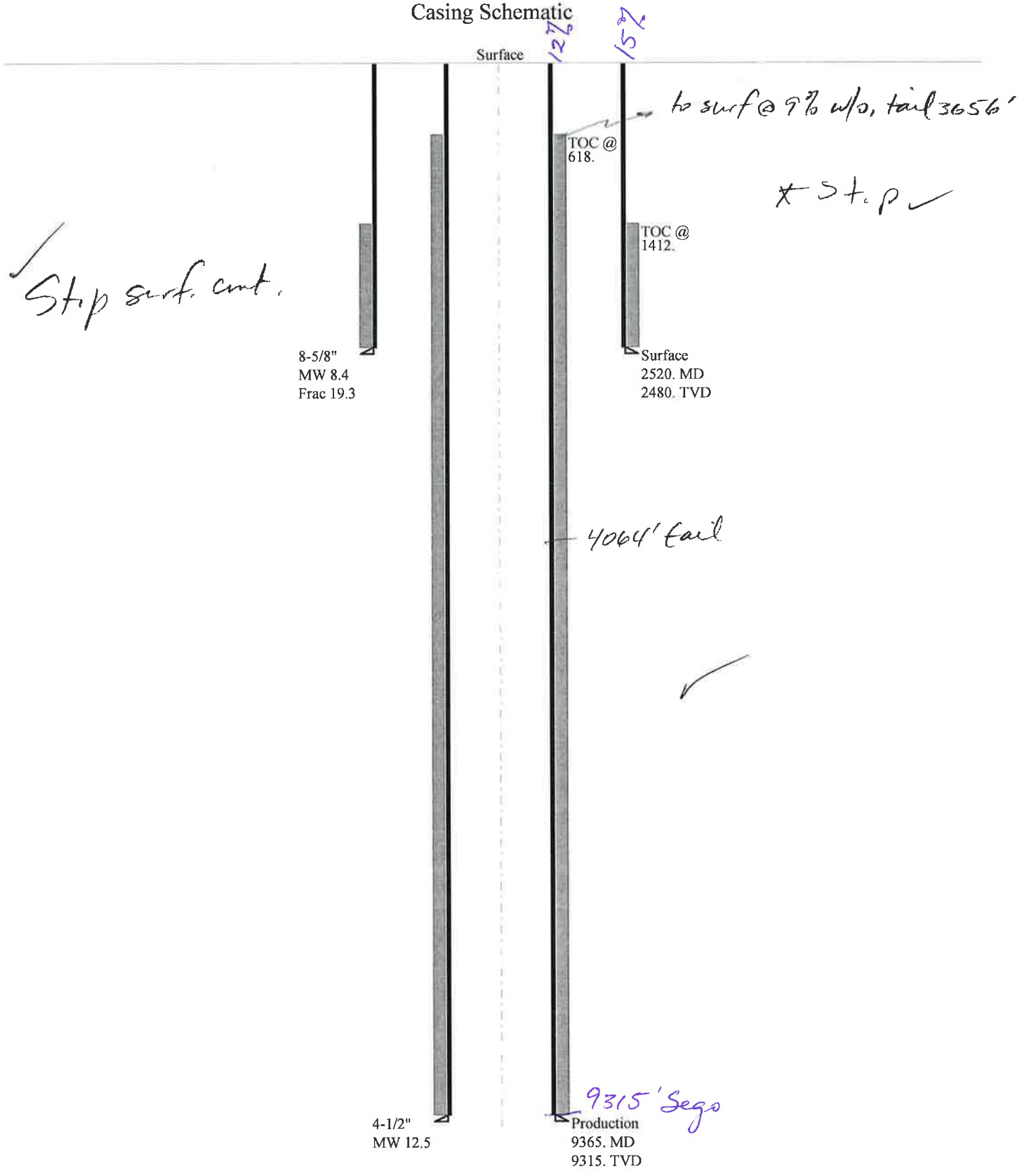
Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

API Well Number: 43047522520000

43047522520000 Morgan State 921-36P4BS

Casing Schematic



Well name:	**43047522520000 Morgan State 921-36P4BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-52252
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 2,183 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,480 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,206 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 109 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,412 ft

Directional Info - Build & Drop
Kick-off point 300 ft
Departure at shoe: 399 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 12 °

Re subsequent strings:
Next setting depth: 9,315 ft
Next mud weight: 12.500 ppg
Next setting BHP: 6,049 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,480 ft
Injection pressure: 2,480 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	2520	8.625	28.00	I-55	LT&C	2480	2520	7.892	99792

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1082	1880	1.737	2480	3390	1.37	69.4	348	5.01 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: February 23,2012
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2480 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43047522520000 Morgan State 921-36P4BS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-52252
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight:	12.500 ppg
Internal fluid density:	1.000 ppg

Burst

Max anticipated surface pressure:	3,999 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	6,049 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.60 (B)

Tension is based on air weight.
Neutral point: 7,625 ft

Estimated cost: 189,618 ($)

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	204 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	618 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	522 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
2	5000	4.5	11.60	I-80	DQX	4950	5000	3.875	132000
1	4365	4.5	11.60	I-80	LT&C	9315	9365	3.875	57618

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2957	5930	2.005	5088	7780	1.53	108.1	267	2.47 J
1	5565	6360	1.143	6049	7780	1.29	50.6	212	4.19 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: February 23,2012
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 9315 ft, a mud weight of 12.5 ppg An internal gradient of .052 psi/ft was used for collapse from TD
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name Morgan State 921-36P4BS
API Number 43047522520000 **APD No** 5103 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SESE **Sec** 36 **Tw** 9.0S **Rng** 21.0E 449 FSL 1003 FEL
GPS Coord (UTM) 628553 4427351 **Surface Owner**

Participants

Sheila Wopsock, Charles Chase, Danielle Piernot, Doyle Holmes, (Anadarko). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Alex Hansen (DWR). Chris Jensen and David Hackford, (DOGM).

Regional/Local Setting & Topography

This site is on an existing location, and very little new construction will be necessary.

This location is within the Natural Buttes Unit but this section is not part of the Natural Buttes Unit. It is approximately 14 road miles southeast of Ouray, Utah. The general area is at the head of a long unnamed wash east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles to the north. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sandstone bedrock cliffs along the rims.

Five new directional wells will be drilled from this location which currently has one well, the Morgan State 13-36. The decision to PA or TA this well has not been made at this time.

Surface Use Plan

Current Surface Use
Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	**Width** 332 **Length** 410	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y **Paleo Potental Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	35	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut except for 1.6 feet on the east side of pit. The reserve pit will be on the east corner of the location. Dimensions are 260’ x 120’ x 12’ deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a layer of felt sub-liner, and also place an excess cut stockpile adjacent to and east of the pit where it will be somewhat in fill.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

Other Observations / Comments

David Hackford	1/11/2012
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
5103	43047522520000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	Morgan State 921-36P4BS		**Unit**		
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	SESE 36 9S 21E S 449 FSL 1003 FEL GPS Coord (UTM) 628572E 4427350N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,520’ of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,000'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill	2/1/2012
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is in the central portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is six miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43.7 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Five wells will be directionally drilled from this location. They are the Morgan State 921-36P4BS, Morgan State 921-36P1CS, Morgan State 921-36P1BS, Morgan State 921-36I4CS and the Morgan State 921-36I4BS. The existing location currently has one well. This well is the Morgan State 13-36. The decision to PA or TA this well has not been made at this time. It will be necessary to place an excess cut stockpile along the west side of the reserve pit where the pit is in 1.6 feet of fill. The pad as modified should be stable and sufficient for six wells, and is the best site for a location in the immediate area.

New construction will consist of approximately 240 feet on the south and 210 feet on the west side of the existing location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Alex Hansen with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

RECEIVED: March 20, 2012

Application for Permit to Drill
Statement of Basis

David Hackford	1/11/2012
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the east side of the location, and an excess cut stockpile placed on the east side of the pit.

RECEIVED: March 20, 2012

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/21/2011 **API NO. ASSIGNED:** 43047522520000

WELL NAME: Morgan State 921-36P4BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SESE 36 090S 210E **Permit Tech Review:** ☑

SURFACE: 0449 FSL 1003 FEL **Engineering Review:** ☑

BOTTOM: 0580 FSL 0494 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 39.98654 **LONGITUDE:** -109.49409

UTM SURF EASTINGS: 628572.00 **NORTHINGS:** 4427350.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22265 **PROPOSED PRODUCING FORMATION(S):** BLACKHAWK

SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ☑ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** 43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit:

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-24

Effective Date: 10/5/2009

Siting: 460' Fr Exterior Lease Boundary

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmacdonald

RECEIVED: March 20, 2012

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill
****

Well Name: Morgan State 921-36P4BS
API Well Number: 43047522520000
Lease Number: ML 22265
Surface Owner: STATE
Approval Date: 3/20/2012

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-24. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Board Cause No. 173-24, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27

pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Additional Approvals:
The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
  - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-231-8956 - after office hours

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or

plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: Morgan State 921-36P4BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047522520000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 7/3/2012	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON JULY 3, 2012 AT 08:30 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
July 09, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 7/9/2012

RECEIVED: Jul. 09, 2012

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By J. Scharnowske Phone Number 720.929.6304
Well Name/Number MORGAN STATE 921-36P4BS
Qtr/Qtr SESE Section 36 Township 9S Range 21E
Lease Serial Number ML 22265
API Number 4304752252

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 07/03/2012 07:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED
JUL 03 2012
DIV. OF OIL, GAS & MINING

Date/Time 07/14/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: Morgan State 921-36P4BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047522520000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6526

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 7/18/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU AIR RIG ON 7/16/2012. DRILLED SURFACE HOLE TO 2580'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
July 26, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Cara Mahler	720 929-6029	Regulatory Analyst I
SIGNATURE N/A		**DATE** 7/23/2012

RECEIVED: Jul. 23, 2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6304

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752252	Morgan State 921-36P4BS		SESE	36	09S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18604	7/3/2012			7/18/2012	

Comments: MIRU TRIPLE A BUCKET RIG. MVRD
SPUD WELL LOCATION ON 7/3/2012 AT 08:30 HRS. BHL: SESE

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752247	Morgan State 921-36P1BS		SESE	36	09S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18599	7/3/2012			7/18/2012	

Comments: MIRU TRIPLE A BUCKET RIG. MVRD
SPUD WELL LOCATION ON 7/3/2012 AT 12:00 HRS. BHL: SESE

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752249	Morgan State 921-36I4BS		SESE	36	09S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18605	7/3/2012			7/18/2012	

Comments: MIRU TRIPLE A BUCKET RIG. MVRD
SPUD WELL LOCATION ON 7/3/2012 AT 15:00 HRS. BHL: NESE

ACTION CODES:

- **A** - Establish new entity for new well (single well only)
- **B** - Add new well to existing entity (group or unit well)
- **C** - Re-assign well from one existing entity to another existing entity
- **D** - Re-assign well from one existing entity to a new entity
- **E** - Other (Explain in 'comments' section)

JAIME SCHARNOWSKE
Name (Please Print)
Signature
REGULATORY ANALYST
Title
6/9/2012
Date

RECEIVED
JUL 11 2012
Div. of Oil, Gas & Mining

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 8/19/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2580' TO 9353' ON 8/17/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P 298 RIG ON 8/19/2012. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
August 21, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Cara Mahler	720 929-6029	Regulatory Analyst I
SIGNATURE		**DATE**
N/A		8/21/2012

Carol Daniels - BOP TEST MS 921-36P4BS T09S R21E S-36 4304752252

From: "Anadarko - H&P 298" <hp298@gesmail.net>
To: <caroldaniels@utah.gov>
Date: 8/13/2012 11:13 AM
Subject: BOP TEST MS 921-36P4BS

MOVING RIG H&P 298 TO MORGAN STATE 921-36P4BS INITIAL PRESSURE TEST ON TUESDAY 8-10 AM 8/14/2012
THANKS

JIM MURRAY
H&P 298
OFFICE 435 828-0957
CELL 425 828-0956
Hp298@gesmail.net

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 10/3/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

No Activity for the month of September 2012. Well TD at 9,353.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
October 03, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Lindsey Frazier	720 929-6857	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		10/3/2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 11/5/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Started completing the well. Well TD at 9,353.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
November 05, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		11/5/2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 12/3/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Started completing the well. Well TD at 9,353.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
December 04, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		12/3/2012

RECEIVED: Dec. 03, 2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 1/3/2013	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Started completing the well. Well TD at 9,353

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
January 07, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Laura Abrams	720 929-6356	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		1/3/2013

RECEIVED: Jan. 03, 2013

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047522520000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0449 FSL 1003 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 1/11/2013	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The subject well was placed on production on 01/11/2013. The Chronological Well History will be submitted with the well completion report.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
January 16, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Lindsey Frazier	720 929-6857	Regulatory Analyst II
SIGNATURE		**DATE**
N/A		1/14/2013

RECEIVED: Jan. 14, 2013

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

7. UNIT or CA AGREEMENT NAME:

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

8. WELL NAME and NUMBER: MORGAN STATE 921-36P4BS

2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 4304752252

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217

PHONE NUMBER: (720) 929-6000

10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SESE 449 FSL 1003 FEL S36,T9S,R21E
AT TOP PRODUCING INTERVAL REPORTED BELOW: SESE 584 FSL 509 FEL S36,T9S,R21E
AT TOTAL DEPTH: SESE 558 FSL 483 FEL S36,T9S,R21E

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 36 9S 21E S

12. COUNTY: UINTAH

13. STATE: UTAH

14. DATE SPUDDED:	15. DATE T.D. REACHED:	16. DATE COMPLETED:	ABANDONED	READY TO PRODUCE	17. ELEVATIONS (DF, RKB, RT, GL):
7/3/2012	8/17/2012	1/11/2013	☐	☑	5036 RKB

18. TOTAL DEPTH:	19. PLUG BACK T.D.:	20. IF MULTIPLE COMPLETIONS, HOW MANY? *	21. DEPTH BRIDGE PLUG SET:
MD 9,353 TVD 9,316	MD 9,287 TVD 9,249		MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL/GR/CCL/TEMP

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,557		750		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,333		1,610		2546	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,803							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) WASATCH	5,969	7,176		
(B) MESAVERDE	7,206	9,251		
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
5,969 7,176	0.36	75	Open ☑ Squeezed ☐
7,206 9,251	0.36	186	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
5969-9251	PUMP 11,252 BBLS SLICK H2O & 257,215 LBS 30/50 OTTAWA SAND
	11 STAGES

RECEIVED
FEB 12 2013
DIV. OF OIL, GAS & MINING

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: PROD

(5/2000)

(CONTINUED ON BACK)

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
1/11/2013		1/17/2013		24			0	1,742	0	FLOWING
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
20/64	2	2,412					0	1,742	0	PROD

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,282
				BIRD'S NEST	1,556
				MAHOGANY	2,070
				WASATCH	4,570
				MESAVERDE	7,190

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 ¼" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 4546'; LTC csg was run from 4546' to 9333'. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) LAURA ABRAMS TITLE REGULATORY ANALYST

SIGNATURE DATE 2/8/2013

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012	
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD		Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012		End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/16/2012	6:00 - 12:00	6.00	MIRU	01	A	P		MOVE IN, RIG UP
	12:00 - 15:00	3.00	PRPSPD	08	A	P		CHANGE OUT HYDRAULIC PUMP
	15:00 - 16:00	1.00	PRPSPD	01	B	P		WELD ON ROTATING HEAD, RIG UP FLOW LINE
	16:00 - 17:00	1.00	PRPSPD	01	B	P		PICK UP BHA, AIR OUT PUMPS
	17:00 - 18:00	1.00	PRPSPD	21	D	Z		WORK ON / REPAIR NOV CELLAR PUMP
	18:00 - 20:00	2.00	DRLSUR	02	D	P		SPUD DRILL 12.25" SURFACE HOLE F/ 49'-150" ROP= 161' @ 81 FPH WOB= 14/22K RPM= 55/105 SPP=800/500 GPM= 595 TRQ= 2600/1900 PU/SO/ROT = 32/28/29 NO LOSSES HOLE IN GOOD SHAPE
	20:00 - 21:30	1.50	DRLSUR	06	A	P		PULL OUT OF HOLE, LAY DOWN 12.25" BIT. PICK UP 11.00" BIT AND DIRECTIONAL TOOLS, TRIP IN HOLE
	21:30 - 0:00	2.50	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/210'-410'ROP=200' @ 80' FPHWOB= 22/30KRPM= 55/105ON BTTM PUMP= 900 PSIOFF BTTM PUMP= 610 PSIGPM= 576 TRQ= 2900/2500UP/DWN/ROT= 54/46/50 HOLE IN GOOD SHAPE
7/17/2012	0:00 - 8:00	8.00	DRLSUR	02	D	P		DRILL 11.00" SURFACE HOLE F/410'-1161' ROP=751' @ 93' FPH WOB= 22/30K RPM= 55/105 ON BTTM PUMP= 980 PSI OFF BTTM PUMP= 780 PSI GPM= 580 TRQ= 2300/1400 UP/DWN/ROT= 74/68/70 HOLE IN GOOD SHAPE
	8:00 - 15:00	7.00	DRLSUR	02	D	P		DRILL 11" SURFACE F/1161 T/1733' RATE OF PENETRATION: 81.75' PER HOUR WEIGHT ON BIT: 22 TO 30 K REV. PER MINUTE:: 55/105 UP/DOWN/ROTATING WEIGHT: 90/80/86 PRESSURE ON & OFF BOTTOM 990/800 PUMP RATE: 580 GALLON PER MINUTE FT LBS OF TORQUE: 2000 TO 3100 LOST CIRCULATION @ 1720' APPLIED AIR @ 500 CFM BIT POSITION: .5' RIGHT & 8' HIGH OF LINE
	15:00 - 16:00	1.00	DRLSUR	22	L	Z		***FAILURE: WEATHERFORD AIR PACKAGE (FUEL PROBLEMS). GOT AIR PACKAGE GOING & BUILT VOLUME.

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED			Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD		Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012		End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 0:00	8.00	DRLSUR	02		P		DRILL 11" SURFACE F/1733 T/2190' RATE OF PENETRATION: 57' PER HOUR WEIGHT ON BIT: 22 TO 30 K REV. PER MINUTE:: 60/105 PRESSURE ON & OFF BOTTOM 1200/930 PUMP RATE: 497 GALLON PER MINUTE FT LBS OF TORQUE: 2800 TO 3150 LOST CIRCULATION @ 1720' APPLIED AIR @ 900 CFM BIT POSITION: 1.37' RIGHT & 5.31' HIGH OF LINE PROBLEMS: NOV TRANSFERRE PUMP UNABLE TO KEEP UP. WE ARE HAVING TO SLOW DOWN TO LET THEM TRANSFERE FROM FAC TANKS.
7/18/2012	0:00 - 5:30	5.50	DRLSUR	02	D	P		DRILL 11" SURFACE F/2190 T/2580' RATE OF PENETRATION: 70.1' PER HOUR WEIGHT ON BIT: 22 TO 30 K REV. PER MINUTE:: 60/105 PRESSURE ON & OFF BOTTOM 1180/960 PUMP RATE: 481 GALLON PER MINUTE FT LBS OF TORQUE: 2800 TO 3150 ON BOTTOM, OFF BOTTOM & ROTATING WEIGHTS. 120/93/105 K LOST CIRCULATION @ 1720' APPLIED AIR @ 900 CFM BIT POSITION: 2.34' RIGHT & 4.34' HIGH OF LINE PROBLEMS: NOV TRANSFER PUMP UNABLE TO KEEP UP. WE ARE HAVING TO SLOW DOWN TO LET THEM TRANSFER FROM FAC TANKS.
	5:30 - 6:30	1.00	DRLSUR	05	C	P		CIRCULATE FOR CASING
	6:30 - 9:30	3.00	DRLSUR	06	D	P		LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, AND DIRECTIONAL TOOLS
	9:30 - 10:00	0.50	CSGSUR	12	A	P		RIG UP TO RUN CASING
	10:00 - 12:00	2.00	CSGSUR	12	C	P		RUN 57 JOINTS 8 5/8", 28#, J55 CASING SHOE AT 2540' BAFFLE AT 2493'
	12:00 - 13:00	1.00	CSGSUR	05	D	P		PUMP ON CASING
	13:00 - 14:00	1.00	CSGSUR	12	A	P		HELD SAFETY MEETING WITH PRO PETRO CMT CREW MAKE UP CMT HEAD PRESSURE TEST LINES TO 2000 PSI. PUMP 20 BBLS WATER AHEAD FOLLOWED BY 20 BBL GEL WATER FLUSH PUMP 300 SX (61.4BBLS) TAIL CLASS G CMT @ 15.8 WT & 1.15 YIELD DROP PLUG & DISPLACE W/ 155 BBL'S WATER BUMP PLUG W/ 500 PSI FINAL LIFT =250 PSI CHECK FLOATS FLOAT HELD NO CEMENT TO SURFACE
	14:00 - 14:30	0.50	CSGSUR	12	E	P		CUT OFF RISER HANG ROTATING HEAD
	14:30 - 15:00	0.50	CSGSUR	12	E	P		PUMP 150 SX (30.7 BBLS) TAIL DOWN BACKSIDE NO CEMENT TO SURFACE
	15:00 - 16:00	1.00	CSGSUR	13	A	P		WAIT ON CEMENT

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012	End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 17:00	1.00	CSGSUR	12	E	P		PUMP 125 SX (25.6 BBLS) TAIL DOWN BACKSIDE. NO CEMENT TO SURFACE RELEASE RIG @ 17:00 (TOPPED OFF CEMENT @ 21:00 ON 7/20/2012)
8/12/2012	4:00 - 6:00	2.00	RDMO	01	E	P		RIG DOWN PREP RIG FOR TRUCKS
	6:00 - 20:00	14.00	RDMO	01	A	P		HSM, WITH H&P CREWS,RW JONES TRUCKING,12 MEN J&C CRANE,4 MEN,RD MOVE RIG W/ 5 BED TRUCKS,2 HAUL TRUCKS,2 FORKLIFTS,1 CRANE,11 RIG HANDS RIG 100% MOVED, W/ BACK YARD SET IN PLACE & RIGGED UP,/SET SKID RAILS /SFTN
	20:00 - 0:00	4.00	RDMO	21	C	P		WAIT ON DAYLIGHT TO CONTINUE TO M.I.R.U.
8/13/2012	0:00 - 6:00	6.00	MIRU	21	C	P		WAIT ON DAY LIGHT
	6:00 - 0:00	18.00	MIRU	01	B	P		SAFETY MEETING / MIRU SET SKID RAILS SET & RAISE SUB UP @ 10:00, PIN IN PLACE,CONTINUE TO RIG UP/ DERRICK UP @ 12:45 JONEC 13 PERSONEL /RELEASED 3 BED TRUCKS,/J&C 5 PERSONNEL OFF LOC @ 14:00 /RW JONES 2 TRUCKS ,2 FORKLIFTS, OFF LOC @ 14:00,H&P PERSONNEL 9 /CONTINUE TO RIG UP,POWER UP ,TEST TDS,DWKS,DRIVE GROUND RODS, RIG UP FLOOR, .
8/14/2012	0:00 - 3:00	3.00	MIRU	01	B	P		STRING UP NEW DRILL LINE ,SPOOL UP DWKS,UNDOCK TOP DRIVE
	3:00 - 4:00	1.00	MIRU	14	A	P		RIG UP SKID JACKS CENTER RIG OVER WELL
	4:00 - 13:00	9.00	PRPSPD	14	A	P		CTJSA NIPPLE UP BOPE,INSTALL NEW ORBIT VALVE
	13:00 - 13:30	0.50	PRPSPD	01	A	P		INSTALL BAILS & ELEVATORS
	13:30 - 19:00	5.50	PRPSPD	15	A	P		CT JSA PRESSURE TEST CASING 1500 HIGH 250 LOW FOR 30 MIN / PRESSURE TEST H&P EQUIP BLIND RAMS, PIPE RAMS , FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES , HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH
	19:00 - 20:00	1.00	PRPSPD	14	B	P		INSTALL WEAR BUSHING,AND ROTATING HEAD BEARING ASSEMBLY
	20:00 - 22:00	2.00	PRPSPD	14	A	P		INSTALL ,SWACO CHOKE LINE & TEST TO 1,000 PSI,REPLACE LEAKING 2'" VALVE ON ROTATING HEAD
	22:00 - 0:00	2.00	PRPSPD	01	B	P		FINISH RIG UP MUD LINE,TRIP TANKS
8/15/2012	0:00 - 1:00	1.00	PRPSPD	01	B	P		FINISH RU FLARE LINES
	1:00 - 2:00	1.00	PRPSPD	01	B	P		PU JOINT DP PUMP THROUGH, TO CLEAN LINES, & KELLY HOSE PICK UP TOOLS,CLEAN RIG FLOOR.
	2:00 - 3:30	1.50	PRPSPD	06	A	P		PU/ MUD MTR,BIT,DIRECTIONAL TOOLS ,SURFACE TEST SAME
	3:30 - 6:00	2.50	PRPSPD	06	A	P		TIH PICK UP DP TO 2,462' , RACK BACK 4 STDS
	6:00 - 8:00	2.00	PRPSPD	07	B	P		LEVEL DERRICK, INSTALL ROTATING HEAD & PUMP THRU SWACO CHOKE
	8:00 - 9:00	1.00	PRPSPD	06	A	P		PICK UP DRILL PIPE
	9:00 - 10:00	1.00	DRLPRO	02	F	P		DRILL OUT CEMENT & SHOE TRACK FROM 2,462' TO 2,540' CLEAN OUT RAT HOLE TO 2,597'

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012	End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 0:00	14.00	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 2,597' TO 4,512' = 1,915' @ 136.78 FPH WOB 22,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 160 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1,920/1525 TORQUE ON/OFF BTM 6,000/ 4,000 PICK UP WT 130,000 SLACK OFF WT 108,000 ROT WT 118,000 SLIDE 243' IN 215 MIN 12.6 % OF FOOTAGE DRILLED, 25.5 %OF HRS DRILLED MUD WT 8.4 VIS 26 NOV-D WATER SWACO OFF LINE
8/16/2012	0:00 - 6:30	6.50	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 4,512' TO 5,579' = 1067' @ 164.15 FPH WOB 22,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 160 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1,960/1650 TORQUE ON/OFF BTM 7,000/ 5,000 PICK UP WT 149,000 SLACK OFF WT 123,000 ROT WT 135,000 SLIDE 65' IN 65 MIN 7.6 % OF FOOTAGE DRILLED, 18.05 %OF HRS DRILLED MUD WT 8.4 VIS 26 NOV-D WATER SWACO OFF LINE
	6:30 - 7:00	0.50	DRLPRO	07	A	P		SERVICE RIG @ 5,579
	7:00 - 8:30	1.50	DRLPRO	22	L	Z		WORK ON BOTH MUD PUMPS REPLACE VALVES & SEATS DUE TO TRASH IN VALVES *** MUD PUMPS***
	8:30 - 0:00	15.50	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 5,579' TO 7,310' = 1,731' @ 111.67 FPH WOB 22,000-26,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 160 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2120/1850 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 189,000 SLACK OFF WT 144,000 ROT WT 167,000 SLIDE 80' IN 120 MIN 4.5 % OF FOOTAGE DRILLED, 11.7%OF HRS DRILLED MUD WT 8.4 VIS 26 NOV-D WATER SWACO OFF LINE

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012	
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD		Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012		End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/17/2012	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 7,310' TO 7,911' = 601' @ 100.16 FPH WOB 22,000-26,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 160 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2120/1850 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 189,000 SLACK OFF WT 144,000 ROT WT 167,000 SLIDE 18' IN 40 MIN 3.8 % OF FOOTAGE DRILLED, 11.1%OF HRS DRILLED MUD WT 8.4 VIS 26 NOV-D WATER SWACO OFF LINE
	6:00 - 14:00	8.00	DRLPRO	02	D	P		DRILL / SURVEY/ F/ 7,911' TO 8,761' = 850' @ 106.25 FPH WOB 22,000-26,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 143 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 2170/1970 TORQUE ON/OFF BTM 14,000/ 11,000 PICK UP WT 230,000 SLACK OFF WT 159,000 ROT WT 186,000 SLIDE 80' IN 120 MIN 4.5 % OF FOOTAGE DRILLED, 11.7%OF HRS DRILLED MUD WT 8.4 VIS 26 NOV-D WATER SWACO ON LINE HOLDING 150 TO 400 PSI ON ANNULAS 10 TO 20 ' FLARE NO WATER LOSS
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	14:30 - 21:30	7.00	DRLPRO	02	D	P		DRILL / SURVEY/ F/ 8,761' TO 9,328' TD' = 592' @ 81 FPH WOB 22,000-26,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 143 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 2170/1970 TORQUE ON/OFF BTM 13,000/ 12,000 PICK UP WT 240,000 SLACK OFF WT 162,000 ROT WT 192,000 MUD WT 11.2 VIS 39 10% LCM SWACO ON LINE 120 TO 300 PSI ON ANNULAS 10 15' FLARE 75 BBL MUD LOSS START DISPLACING HOLE WITH 11.2 PPG MUD@ 9,130'
	21:30 - 23:30	2.00	DRLPRO	22	G	P		LOSSING RETURNS BUILD VOLUME 325 BBL MUD LOSS *** LOST CIRCULATION ***

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: H&P 298/298, CAPSTAR 310/310
Event: DRILLING	Start Date: 7/5/2012	End Date: 8/19/2012
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	23:30 - 0:00	0.50	DRLPRO	02	D	P		DRILL FROM 9,328' TO 9,353' TD W/ PARTIAL RETURNS / 50 BBL MUD LOSS
8/18/2012	0:00 - 1:30	1.50	DRLPRO	05	A	P		CIRULATE & CONDITION MUD @ 9,353' TD RAISE MUD WT TO 11.4 PPG / NO MUD LOSS
	1:30 - 3:00	1.50	DRLPRO	06	E	P		20 STAND WIPER TRIP / WITH NO PROBLEMS 5' FILL
	3:00 - 5:00	2.00	DRLPRO	05	A	P		CIRULATE & CONDITION MUD @ 9,353' - 10 -20 FT FLARE ON BTMS UP / 3 10'S MUD CUT FROM 11.4 TO 11.1 / RAISE MUD WT TO 11.8 PPG 10% LCM NO MUD LOSS
	5:00 - 11:00	6.00	DRLPRO	06	A	P		TOOH FROM 9,353' TO BIT LAY DOWN DIRECTIONAL TOOLS - TIGHT HOLE @ 4,530' - WIPE AND WORK SAME
	11:00 - 12:00	1.00	DRLPRO	14	B	P		PULL SMITH BEARING ASSY / INSTALL TRIP NIPPLE / PULL WEAR BUSHING
	12:00 - 14:00	2.00	DRLPRO	12	A	P		CHANGE OUT BAILS / PRE JOB SAFETY MEETING / RIG UP FRANKS CASING EQUIPMENT
	14:00 - 21:00	7.00	DRLPRO	12	C	P		RUN 4 1/2" CASING TO 9,333'/ SHOE @ 9,333' / FLOAT COLLAR @ 9,287' / Mverde Marker @ 7,170' / X-O @ 4,546' / TOTAL JTS RAN 212 / WITH NO PROBLEMS
	21:00 - 22:30	1.50	DRLPRO	05	A	P		CIRC & CONDITION MUD / MEANWHILE RIG DOWN FRANKS CASING EQUIPMENT/ HOLD PRE JOB SAFETY MEETING WITH BJ CEMENTERS / NO LOSSES HOLE IN GOOD SHAPE
	22:30 - 0:00	1.50	DRLPRO	12	E	P		INSTALL BJ CMT HEAD , TEST PUMP & LINES TO 5,186 PSI, ,DROP BOTTOM PLUG PUMP 25 BBLS FW PUMP 510 SKS LEAD CEMENT @ 12.5 PPG,(180.06 BBLS) (PREM LITE II + .0.25 pps CELLO FLAKE + 5 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.3 % R-3 +0.4%bwoc FL-52 100.1% FRESH WATER / (10.44 gal/sx, 1.98 yield) + 1100 SX TAIL @ 14.3 ppg(257.78 BBLS)+ (CLS G 50/50 POZ + 10% SALT + .005lbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE +0.5%EC-1+ 58.9% FW / (5.94 gal/sx, 1.32 yield)
8/19/2012	0:00 - 2:00	2.00	DRLPRO	12	E	P		CONTINUE TO CEMENT AS PER PROGRAM - DISPLACE WITH 144 BBL WATER / LOST RETURNS 130 BBL INTO DISPLACEMENT / GOOD LIFT PRESSURE @ 2550 / BUMP PLUG TO 3107 / FLOATS HELD RD BJ CEMENTERS
	2:00 - 4:00	2.00	DRLPRO	14	B	P		FLUSH BOP'S & EQUIPMENT / SET PACK OFF WITH CAMERON / LD RUNNING TOOL
	4:00 - 6:00	2.00	DRLPRO	14	A	P		RIG DOWN CASING BAILS / NIPPLE DOWN BOP'S & EQUIPMENT / RELEASE RIG @ 06:00 HRS 8/19/12

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36P4BS RED	**Wellbore No.**	OH
Well Name	MORGAN STATE 921-36P4BS	**Wellbore Name**	MORGAN STATE 921-36P4BS
Report No.	1	**Report Date**	11/28/2012
Project	UTAH-UINTAH	**Site**	MORGAN STATE 921-36P PAD
Rig Name/No.		**Event**	COMPLETION
Start Date	11/28/2012	**End Date**	1/11/2013
Spud Date	7/16/2012	**Active Datum**	RKB @5,036.00usft (above Mean Sea Level)
UWI	SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0		

1.3 General

Contractor		**Job Method**		**Supervisor**	
Perforated Assembly		**Conveyed Method**			

1.4 Initial Conditions

Fluid Type		**Fluid Density**	
Surface Press		**Estimate Res Press**	
TVD Fluid Top		**Fluid Head**	
Hydrostatic Press		**Press Difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	5,969.0 (usft)-9,251.0 (usft	**Start Date/Time**	12/14/2012 12:00AM
No. of Intervals	62	**End Date/Time**	12/14/2012 12:00AM
Total Shots	261	**Net Perforation Interval**	81.00 (usft)
Avg Shot Density	3.22 (shot/ft)	**Final Surface Pressure**	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	WASATCH/			5,969.0	5,973.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	WASATCH/			6,038.0	6,040.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,267.0	6,269.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,347.0	6,349.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,516.0	6,518.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,573.0	6,575.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,781.0	6,783.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,819.0	6,821.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			6,889.0	6,891.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12/14/2012 12:00AM	WASATCH/			7,175.0	7,176.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,206.0	7,207.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,238.0	7,239.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,267.0	7,268.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,286.0	7,287.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,325.0	7,326.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	MESAVERDE/			7,344.0	7,345.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,352.0	7,353.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,549.0	7,551.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,598.0	7,599.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,616.0	7,618.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,662.0	7,663.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,690.0	7,692.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,790.0	7,791.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,830.0	7,831.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,867.0	7,868.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,901.0	7,902.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,922.0	7,923.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,932.0	7,933.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			7,942.0	7,943.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	MESAVERDE/			7,955.0	7,956.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,011.0	8,012.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,021.0	8,022.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,059.0	8,060.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,097.0	8,098.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,121.0	8,122.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,167.0	8,168.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,176.0	8,177.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,199.0	8,200.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,299.0	8,300.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,315.0	8,316.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,332.0	8,333.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,349.0	8,350.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,376.0	8,377.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	MESAVERDE/			8,455.0	8,456.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,466.0	8,467.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,487.0	8,488.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,547.0	8,548.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,567.0	8,568.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,587.0	8,588.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,638.0	8,639.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,753.0	8,755.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,775.0	8,776.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,783.0	8,784.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,842.0	8,843.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,854.0	8,855.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,873.0	8,874.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,945.0	8,946.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/14/2012 12:00AM	MESAVERDE/			8,959.0	8,960.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,966.0	8,967.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			8,988.0	8,989.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			9,205.0	9,208.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12/14/2012 12:00AM	MESAVERDE/			9,248.0	9,251.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/16/2012	13:00 - 13:30	0.50	FRAC	33	C	P		RU HOT OILER, FILLED SURFACE WITH 1/2 BBL TMAC PRESSURED TO 1500, PSI, NO BLEED OFF, BLED PSI OFF SURFACE, SWI
11/28/2012	9:00 - 11:00	2.00	FRAC	33	C	P		RU HOT OILER FILLED SURFACE WITH 1/2 BBL TMAC PRESSURED TO 1400 PSI HELD FOR 5 MIN NO BLEED OFF BLED WELL DOWN SWIFN
11/29/2012	-							
12/18/2012	11:15 - 12:00	0.75	FRAC	33	C	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 28 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.SWIFN
12/28/2012	7:00 - 10:00	3.00	FRAC	37	B	P		HSM, RIGGING UP / PERF STG #1] P/U RIH PERF GUN, PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE,
12/31/2012	7:00 - 14:30	7.50	FRAC	46	F	Z		WAITING ON NABORS FRAC CREW TO GET RIGGED UP / PROBLEMS W/ BLENDER AND COMUNICATION TO VAN. PRESSURE TEST LINES TO 9,300# LOST 287# IN 5 MIN. SDFN
1/1/2013	6:30 - 6:45	0.25	FRAC	48	B	P		HSM, ICE PLUGS,HIGH PRESSURE

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:45 - 18:00	11.25	FRAC	36	B	P		PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 30/50 MESH SAND & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S. REFER TO STIM PJR FOR FLUID, SAND AND CHEMICL VOLUME PUM'D FRAC STG #1] WHP=1,641#, BRK DN PERFS=3,357#, @=4.4 BPM, INJ RT=50.4, INJ PSI=5,785#, INITIAL ISIP=2,829#, INITIAL FG=.75, FINAL ISIP=2,842#, FINAL FG=.75, AVERAGE RATE=47.8, AVERAGE PRESSURE=5,920#, MAX RATE=57.6, MAX PRESSURE=6,694#, NET PRESSURE INCREASE=13#, 22/24 92% CALC PERFS OPEN. X OVER TO WIRE LINE PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9,019', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG #2] WHP=1,589#, BRK DN PERFS=2,177#, @=1.7 BPM, INJ RT=34.3, INJ PSI=4,682#, INITIAL ISIP=1,657#, INITIAL FG=.62, FINAL ISIP=2,481#, FINAL FG=.72, AVERAGE RATE=41, AVERAGE PRESSURE=5,962#, MAX RATE=45.9, MAX PRESSURE=6,306#, NET PRESSURE INCREASE=824#, 13/21 62% CALC PERFS OPEN. X OVER TO WIRE LINE PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,814', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG #3] WHP=1,619#, BRK DN PERFS=4,204#, @=4.3 BPM, INJ RT=38.6, INJ PSI=5,824#, INITIAL ISIP=1,931#, INITIAL FG=.66, FINAL ISIP=2,656#, FINAL FG=.75, AVERAGE RATE=35.8, AVERAGE PRESSURE=5,619#, MAX RATE=43.8, MAX PRESSURE=6,409#, NET PRESSURE INCREASE=725#, 15/24 63% CALC PERFS OPEN. X OVER TO WIRE LINE PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,518', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. SWIFN

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/2/2013	6:30 - 18:00	11.50	FRAC	36	B	P		CONT PERF AND FRAC. FRAC STG 4) WHP 1532 PSI, BRK 2864 PSI @ 4.7 BPM. ISIP 1866 PSI, FG .0.66, CALC PERFS OPEN @ 44.4 BPM @ 6165 PSI = 63% HOLES OPEN. 0 ISIP 2081 PSI, FG .0.69, NPI 215 PSI. 0 MP 6321 PSI, MR 46.8 BPM, AP 5556 PSI, AR 41.9 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8230', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG 5) WHP 1800 PSI, BRK 5508 PSI @ 4.7 BPM. ISIP 2069 PSI, FG .0.69, CALC PERFS OPEN @ 35.1 BPM @ 5530 PSI = 63% HOLES OPEN. 0 ISIP 2041 PSI, FG .0.69, NPI -28 PSI. 0 MP 6709 PSI, MR 50.5 BPM, AP 5549 PSI, AR 32 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7986', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG 6) WHP 1836 PSI, BRK 3706 PSI @ 4.7 BPM. ISIP 2123 PSI, FG .0.71, CALC PERFS OPEN @ 46.7 BPM @ 5292 PSI = 71% HOLES OPEN. 0 ISIP 2233 PSI, FG .0.72, NPI 110 PSI. 0 MP 6438 PSI, MR 52 BPM, AP 5391 PSI, AR 47.9 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7722', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. SWI. DRAIN EQUIP.
1/3/2013	7:00 - 8:00	1.00	FRAC	36	B	P		wait on frac crew

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:00 - 18:00	10.00	FRAC					HSM, CONT PERF AND FRAC. FRAC STG 7) WHP 1119 PSI, BRK 2336 PSI @ 4.7 BPM. ISIP 1651 PSI, FG .0.66, CALC PERFS OPEN @ 40.6 BPM @ 5292 PSI = 63% HOLES OPEN. (24/24 HOLES OPEN) 0 ISIP 2043 PSI, FG .0.71, NPI 392 PSI. 0 MP 6407 PSI, MR 45.2 BPM, AP 5795 PSI, AR 43.1 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7383', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG 8) WHP 643 PSI, BRK 1990 PSI @ 4.7 BPM. ISIP 1405 PSI, FG .0.63, CALC PERFS OPEN @ 48.5 BPM @ 5417 PSI = 63% HOLES OPEN. (24/24 HOLES OPEN) 0 ISIP 1706 PSI, FG .0.67, NPI 301 PSI. 0 MP 5997 PSI, MR 48.8 BPM, AP 5495 PSI, AR 47.6 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6921', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. SWI. DRAIN EQUIP.
1/4/2013	7:00 - 18:00	11.00	FRAC	46	E	Z		FRAC CREW SAND MOVER BROKE DOWN.

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/5/2013	4:00 - 18:00	14.00	FRAC	36	B	P		HSM, CONT PERF AND FRAC. FRAC STG 9) WHP 278 PSI, BRK 3062 PSI @ 3.1 BPM. ISIP 1244 PSI, FG .0.62, CALC PERFS OPEN @ 40.1 BPM @ 5907 PSI = 63% HOLES OPEN. ISIP 1976 PSI, FG .0.72, NPI 732 PSI. MP 6365 PSI, MR 49.5 BPM, AP 5800 PSI, AR 42.8 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #10] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6605', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG 10) WHP 593 PSI, BRK 2110 PSI @ 3.7 BPM. ISIP 1563 PSI, FG .0.68, CALC PERFS OPEN @ 46.7 BPM @ 5135 PSI = 63% HOLES OPEN. (24/24 HOLES OPEN) 0 ISIP 1686 PSI, FG .0.72, NPI 732 PSI. 0 MP 6504 PSI, MR 48.1 BPM, AP 4883 PSI, AR 45.5 BPM, PUMPED 30/50 OWATTA SAND. PERF STG #11] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6070', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. FRAC STG 11) WHP 492 PSI, BRK 1897 PSI @ 3.5 BPM. ISIP 761 PSI, FG .0.57, CALC PERFS OPEN @ 50.7 BPM @ 5167 PSI = 63% HOLES OPEN. ISIP 1160 PSI, FG .0.63, NPI 399 PSI. 0 MP 5984 PSI, MR 51.6 BPM, AP 5221 PSI, AR 51.2 BPM, PUMPED 30/50 OWATTA SAND. RIH W/ WIRELINE. SET HAL 8K CBP (KILL PLUG) @5919'. POOH W/ WIRELINE. SWI. FRAC COMPLETE. TOTAL SAND PUMPED = 257,215# TOTAL FLUID PUMPED = 11252 BBLS
	4:00 - 5:30	1.50	FRAC	46	E	Z		BLEW OUT PACKING ON FRAC PUMP.
1/10/2013	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA
	7:15 - 17:00	9.75	DRLOUT	31	I	P		MOVE RIG & EQUIP FROM NBU 1022-11J, MIRU, NDWH, NUBOP, PU 3 7/8" BIT & POBS W/ XN SN RIH W/ 186 JTS 2 3/8" L-80 TAG FILL @ 5,904', POOH LD 2 JTS, RU PWR SWVL, SWI, SDFN
1/11/2013	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012	
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD		Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012		End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 16:00	8.75	DRLOUT	44	C	P		BRK CIRC, PRESS TEST BOP TO 3,000 PSI, LOST 0 PSI IN 15 MIN, PU 2 JTS TBG TAG FILL @ 5,904'. C/O 15' SAND TAG PLUG #1 @ 5,919', DRL HAL 8K CBP IN 6 MIN, 250 PSI INC, FCP 50 PSI, RIH TAG FILL @ 6,040'. C/O 30' SAND TAG PLUG #2 @ 6,070', DRL HAL 8K CBP IN 7 MIN, 0 PSI INC, FCP 50 PSI, RIH TAG FILL @ 6,520'. C/O 85' SAND TAG PLUG #3 @ 6,605', DRL HAL 8K CBP IN 6 MIN, 100 PSI INC, FCP 50 PSI, RIH TAG FILL @ 6,856'. C/O 65' SAND TAG PLUG #4 @ 6,921', DRL HAL 8K CBP IN 5 MIN, 550 PSI INC, FCP 100 PSI, RIH TAG FILL @ 7,353'. C/O 30' SAND TAG PLUG #5 @ 7,383', DRL HAL 8K CBP IN 8 MIN, 500 PSI INC, FCP 150 PSI, RIH TAG FILL @ 7,682'. C/O 40' SAND TAG PLUG #6 @ 7,722', DRL HAL 8K CBP IN, 7 MIN, 600 PSI INC, FCP 300 PSI, RIH TAG FILL @ 7,961'. C/O 25' SAND TAG PLUG #7 @ 7,986', DRL HAL 8K CBP IN 6 MIN, 250 PSI INC, FCP 300 PSI, RIH TAG FILL @ 8,210'. C/O 20' SAND TAG PLUG #8 @ 8,230', DRL HAL 8K CBP IN 6 MIN, 350 PSI INC, FCP 350 PSI, RIH TAG FILL @ 8,448'. C/O 70' SAND TAG PLUG #9 @ 8,518', DRL HAL 8K CBP IN 8 MIN, 150 PSI INC,FCP 350 PSI, RIH TAG FILL @ 8,794'. C/O 20' SAND TAG PLUG #10 @ 8,814', DRL HAL 8K CBP IN 8 MIN, 0 PSI INC, FCP 350 PSI, RIH TAG FILL @ 8,989'. C/O 30' SAND TAG PLUG # 11 @ 9,019', DRL HAL 8K CBP IN 6 MIN, 400 PSI INC, FCP 500 PSI, RIH TAG FILL @ 9,257'. C/O 30' SAND TO PBTD @ 9,287', CIRC CLEAN, RD PWR SWIVEL, POOH LD 37 JTS TBG,LAND TBG W/ 276 JTS 2 3/8" L-80 EOT @ 8,803.17', RD FLOOR & TBG EQUIP, NDBOP, NUWH, DROP BALL POBS @ 2,200 PSI, PRESS TEST FLOWLINE BETWEEN HAL 9,000 & WELLHEAD TO 3,000 PSI, LET BIT FALL 20 MIN TURN OVER TO FBC, WINTERIZE EQUIP, 0SDFWE.

US ROCKIES REGION

Operation Summary Report

Well: MORGAN STATE 921-36P4BS RED		Spud Date: 7/16/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36P PAD	Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: COMPLETION	Start Date: 11/28/2012	End Date: 1/11/2013
Active Datum: RKB @5,036.00usft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/36/0/0/26/PM/S/449/E/0/1003/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								KB-26' HANGER-.83' 276 JTS 2 3/8" L-80-8,774.14' POBS-2.20' EOT @ 8,803.17' 313 JTS DEL 276 JTS USED 37 JTS RET TWTR=11,492 BBLS TWR=2,586 BBLS TWLTR=8,906 BBLS
	16:00 - 16:00	0.00	DRLOUT	50				WELL TURNED TO SALES@ 1550HR ON 1/11/2013. 2600 MCFD, 1560 BWPD, FCP 2000#, FTP 2000#, 20/64" CK.

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_MORGAN STATE 921-36P PAD
Well: MORGAN STATE 921-36P4BS
Wellbore: MORGAN STATE 921-36P4BS
Section:
SHL:
Design: MORGAN STATE 921-36P4BS (wp01)
Latitude: 39.986605
Longitude: -109.493557
GL: 5010.00
KB: 26' RKB + 5010' GL @ 5036.00ft

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4502.00	4540.05	WASATCH
5102.00	5140.39	INTERCEPT
7129.00	7167.43	MESAVERDE
9315.00	9353.46	SEGO

WELL DETAILS: MORGAN STATE 921-36P4BS

Ground Level: 5010.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	14524732.11	2062399.53	39.986605	-109.493557	

CASING DETAILS

TVD	MD	Name	Size
2519.41	2540.00	8-5/8	8-5/8

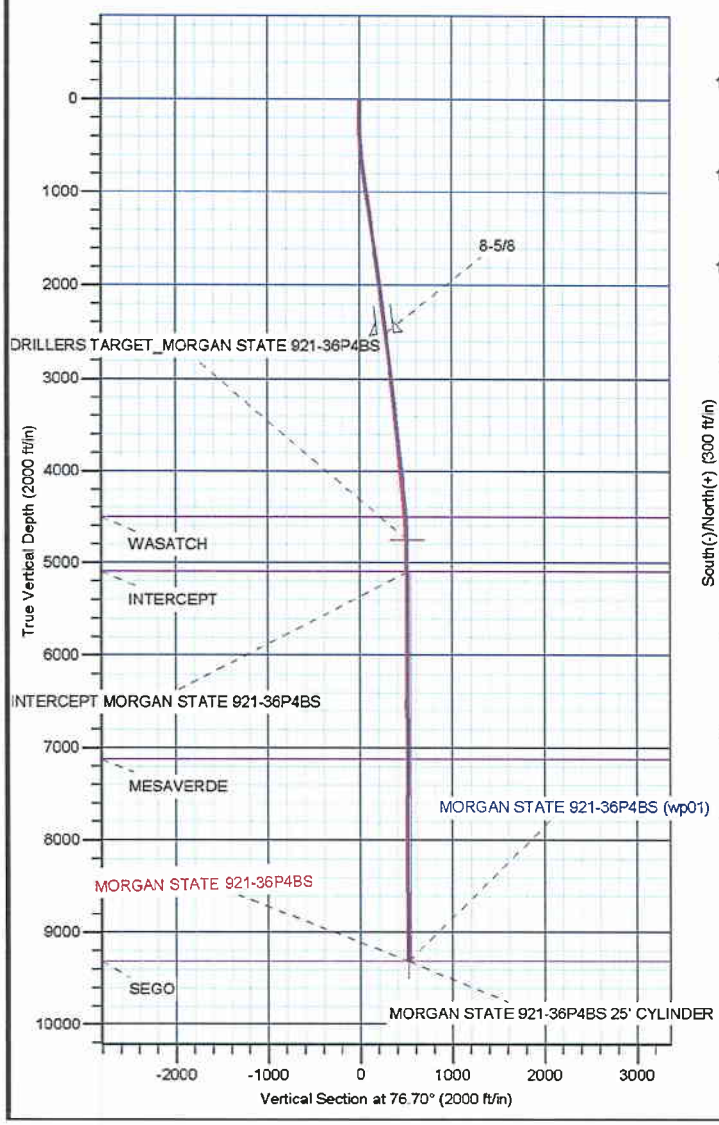
Azimuths to True North
Magnetic North: 10.93°
Magnetic Field
Strength: 52210.1snT
Dip Angle: 65.83°
Date: 7/31/2012
Model: IGRF2010

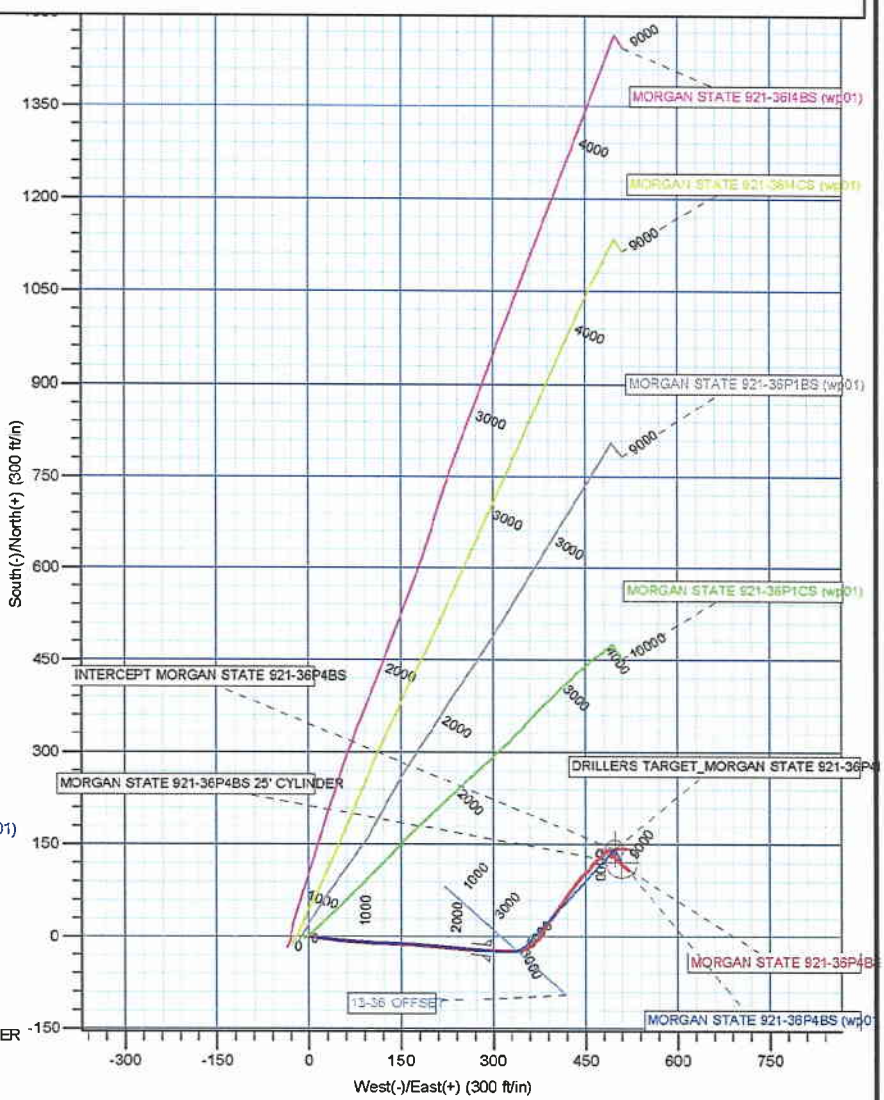
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DRILLERS TARGET_MORGAN STATE 921-36P4BS	4757.64	142.91	497.37	14524883.40	2062894.42	39.986997	-109.491782	Circle (Radius: 15.00)
INTERCEPT MORGAN STATE 921-36P4BS	5102.00	141.44	498.09	14524881.94	2062895.16	39.986993	-109.491779	Point
MORGAN STATE 921-36P4BS 25' CYLINDER	9315.00	120.19	508.51	14524860.88	2062905.94	39.986935	-109.491742	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2541.00	7.83	95.14	2520.40	-22.80	294.54	0.00	0.00	281.40
2716.00	7.83	95.14	2693.77	-24.93	318.29	0.00	0.00	304.02
3059.95	7.72	42.50	3034.97	-9.98	357.28	2.00	-116.92	345.40
4409.95	7.72	42.50	4372.73	123.76	479.82	0.00	0.00	495.42
4796.03	0.00	42.50	4757.64	142.91	497.37	2.00	180.00	516.90
4903.31	0.32	153.88	4864.92	142.64	497.50	0.30	153.88	516.97
9353.46	0.32	153.88	9315.00	120.19	508.51	0.00	0.00	522.52





US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
UINTAH_MORGAN STATE 921-36P PAD
MORGAN STATE 921-36P4BS

MORGAN STATE 921-36P4BS

Design: MORGAN STATE 921-36P4BS

Standard Survey Report

30 August, 2012

Andarko Petroleum Corporation

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Site:	UINTAH_MORGAN STATE 921-36P PAD	**MD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Well:	MORGAN STATE 921-36P4BS	**North Reference:**	True
Wellbore:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Design:	MORGAN STATE 921-36P4BS	**Database:**	edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site UINTAH_MORGAN STATE 921-36P PAD

Site Position:		**Northing:**	14,524,732.11 usft	**Latitude:**	39.986605
From:	Lat/Long	**Easting:**	2,062,399.53 usft	**Longitude:**	-109.493557
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.97 °

Well MORGAN STATE 921-36P4BS

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,524,732.11 usft	**Latitude:**	39.986605
	+E/-W	0.00 ft	**Easting:**	2,062,399.53 usft	**Longitude:**	-109.493557
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,010.00 ft

Wellbore MORGAN STATE 921-36P4BS

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	7/31/2012	10.93	65.83	52,210

Design MORGAN STATE 921-36P4BS

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	***Tie On Depth:***	17.00

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	559.99	0.00	0.00	78.14

Survey Program **Date** 8/29/2012

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
248.00	2,541.00	Survey #1 (MORGAN STATE 921-36P4BS	MWD	MWD - STANDARD
2,595.00	9,353.00	Survey #2 (MORGAN STATE 921-36P4BS	MWD	MWD - STANDARD

Survey

Measured Depth (ft)	**Inclination (°)**	**Azimuth (°)**	**Vertical Depth (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Vertical Section (ft)**	**Dogleg Rate (°/100usft)**	**Build Rate (°/100usft)**	**Turn Rate (°/100usft)**
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00
248.00	0.09	108.58	248.00	-0.06	0.17	0.16	0.04	0.04	0.00
339.00	1.32	101.73	338.99	-0.29	1.27	1.18	1.35	1.35	-7.53
429.00	2.98	95.97	428.92	-0.75	4.61	4.36	1.86	1.84	-6.40
522.00	5.19	96.54	521.68	-1.48	11.19	10.65	2.38	2.38	0.61
617.00	7.12	98.12	616.13	-2.80	21.29	20.26	2.04	2.03	1.66
711.00	7.47	97.86	709.37	-4.46	33.11	31.49	0.37	0.37	-0.28
804.00	8.35	97.16	801.48	-6.13	45.80	43.56	0.95	0.95	-0.75
900.00	9.37	94.57	896.34	-7.62	60.51	57.65	1.14	1.06	-2.70
993.00	8.18	90.21	988.25	-8.25	74.67	71.38	1.47	-1.28	-4.69

Andarko Petroleum Corporation

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Site:	UINTAH_MORGAN STATE 921-36P PAD	**MD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Well:	MORGAN STATE 921-36P4BS	**North Reference:**	True
Wellbore:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Design:	MORGAN STATE 921-36P4BS	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,087.00	8.00	96.63	1,081.31	-9.03	87.85	84.12	0.98	-0.19	6.83
1,183.00	8.00	93.20	1,176.38	-10.17	101.16	96.91	0.50	0.00	-3.57
1,279.00	8.53	92.94	1,271.38	-10.91	114.94	110.25	0.55	0.55	-0.27
1,372.00	8.53	90.65	1,363.36	-11.34	128.73	123.65	0.37	0.00	-2.46
1,466.00	9.15	90.30	1,456.24	-11.46	143.17	137.76	0.66	0.66	-0.37
1,557.00	9.15	94.87	1,546.08	-12.11	157.61	151.76	0.80	0.00	5.02
1,651.00	8.97	92.32	1,638.91	-13.04	172.38	166.02	0.47	-0.19	-2.71
1,745.00	8.62	95.05	1,731.80	-13.96	186.72	179.87	0.58	-0.37	2.90
1,837.00	8.18	96.89	1,822.82	-15.35	200.09	192.66	0.56	-0.48	2.00
1,932.00	7.74	94.17	1,916.90	-16.63	213.18	205.21	0.61	-0.46	-2.86
2,026.00	7.39	92.32	2,010.08	-17.33	225.53	217.16	0.45	-0.37	-1.97
2,121.00	7.56	93.82	2,104.28	-17.99	237.87	229.10	0.27	0.18	1.58
2,214.00	7.83	97.95	2,196.44	-19.28	250.25	240.95	0.66	0.29	4.44
2,308.00	7.83	95.31	2,289.56	-20.76	262.97	253.09	0.38	0.00	-2.81
2,403.00	7.91	91.27	2,383.67	-21.50	275.95	265.64	0.59	0.08	-4.25
2,496.00	7.65	95.49	2,475.81	-22.23	288.51	277.78	0.67	-0.28	4.54
2,541.00	7.83	95.14	2,520.40	-22.80	294.54	283.57	0.41	0.40	-0.78
TIE ON									
2,595.00	7.75	93.95	2,573.91	-23.38	301.84	290.59	0.33	-0.15	-2.20
FIRST MWD SURVEY									
2,658.00	7.46	92.43	2,636.35	-23.84	310.16	298.64	0.56	-0.46	-2.41
2,752.00	6.63	88.58	2,729.64	-23.97	321.68	309.89	1.02	-0.88	-4.10
2,847.00	7.44	89.20	2,823.93	-23.74	333.31	321.32	0.86	0.85	0.65
2,941.00	7.69	75.58	2,917.12	-22.09	345.49	333.58	1.92	0.27	-14.49
3,036.00	7.69	61.33	3,011.27	-17.46	357.23	346.01	2.00	0.00	-15.00
3,130.00	7.25	44.70	3,104.48	-10.23	366.92	356.98	2.34	-0.47	-17.69
3,225.00	7.63	34.83	3,198.69	-0.79	374.74	366.58	1.40	0.40	-10.39
3,319.00	6.44	31.20	3,291.98	8.84	381.03	374.72	1.35	-1.27	-3.86
3,414.00	7.50	32.45	3,386.27	18.63	387.12	382.68	1.13	1.12	1.32
3,507.00	7.56	32.83	3,478.47	28.90	393.69	391.23	0.08	0.06	0.41
3,601.00	7.38	36.58	3,571.67	38.94	400.64	400.09	0.55	-0.19	3.99
3,696.00	7.13	38.08	3,665.91	48.48	407.91	409.17	0.33	-0.26	1.58
3,790.00	7.00	33.70	3,759.20	57.84	414.69	417.72	0.59	-0.14	-4.66
3,885.00	7.13	33.58	3,853.48	67.57	421.16	426.06	0.14	0.14	-0.13
3,979.00	7.88	36.20	3,946.67	77.63	428.20	435.01	0.88	0.80	2.79
4,074.00	5.75	35.45	4,041.00	86.76	434.80	443.35	2.24	-2.24	-0.79
4,168.00	5.50	41.08	4,134.55	93.99	440.49	450.41	0.64	-0.27	5.99
4,263.00	6.69	45.20	4,229.01	101.32	447.41	458.68	1.33	1.25	4.34
4,357.00	7.00	44.33	4,322.34	109.28	455.30	468.04	0.35	0.33	-0.93
4,452.00	5.44	41.58	4,416.78	116.79	462.33	476.47	1.67	-1.64	-2.89
4,546.00	4.38	41.08	4,510.43	122.83	467.65	482.91	1.13	-1.13	-0.53
4,640.00	3.94	44.95	4,604.18	127.82	472.29	488.48	0.55	-0.47	4.12
4,735.00	3.50	44.95	4,698.98	132.18	476.64	493.64	0.46	-0.46	0.00

Andarko Petroleum Corporation

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Site:	UINTAH_MORGAN STATE 921-36P PAD	**MD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Well:	MORGAN STATE 921-36P4BS	**North Reference:**	True
Wellbore:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Design:	MORGAN STATE 921-36P4BS	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,829.00	3.06	50.83	4,792.83	135.79	480.62	498.27	0.59	-0.47	6.26
4,924.00	2.69	52.08	4,887.71	138.77	484.34	502.52	0.40	-0.39	1.32
5,018.00	2.63	82.33	4,981.61	140.41	488.22	506.65	1.48	-0.06	32.18
5,113.00	2.75	117.20	5,076.51	139.66	492.41	510.60	1.70	0.13	36.71
5,207.00	0.94	83.70	5,170.46	138.71	495.18	513.12	2.16	-1.93	-35.64
5,302.00	0.38	277.33	5,265.46	138.84	495.64	513.59	1.38	-0.59	-175.13
5,396.00	0.50	246.58	5,359.46	138.72	494.96	512.90	0.28	0.13	-32.71
5,490.00	0.44	226.58	5,453.45	138.30	494.32	512.19	0.18	-0.06	-21.28
5,585.00	0.41	215.59	5,548.45	137.78	493.85	511.63	0.09	-0.03	-11.57
5,679.00	0.25	181.95	5,642.45	137.30	493.65	511.33	0.26	-0.17	-35.79
5,773.00	0.31	191.45	5,736.45	136.84	493.59	511.18	0.08	0.06	10.11
5,868.00	0.56	178.70	5,831.44	136.13	493.55	510.99	0.28	0.26	-13.42
5,962.00	0.75	171.95	5,925.44	135.06	493.65	510.87	0.22	0.20	-7.18
6,057.00	0.81	162.33	6,020.43	133.80	493.94	510.90	0.15	0.06	-10.13
6,151.00	0.94	158.33	6,114.42	132.45	494.43	511.09	0.15	0.14	-4.26
6,264.00	0.81	274.33	6,227.41	131.65	493.97	510.49	1.31	-0.12	102.66
6,340.00	0.94	310.20	6,303.40	132.10	492.96	509.59	0.73	0.17	47.20
6,435.00	0.81	307.83	6,398.39	133.01	491.84	508.67	0.14	-0.14	-2.49
6,530.00	0.94	54.70	6,493.39	133.87	491.94	508.95	1.48	0.14	112.49
6,624.00	1.06	60.70	6,587.37	134.74	493.33	510.49	0.17	0.13	6.38
6,718.00	1.13	77.45	6,681.35	135.37	494.99	512.25	0.35	0.07	17.82
6,813.00	1.25	89.58	6,776.33	135.58	496.94	514.20	0.29	0.13	12.77
6,907.00	0.13	39.08	6,870.33	135.67	498.04	515.29	1.25	-1.19	-53.72
7,002.00	0.31	119.08	6,965.33	135.63	498.33	515.56	0.33	0.19	84.21
7,096.00	0.75	286.58	7,059.32	135.68	497.96	515.22	1.12	0.47	178.19
7,191.00	0.69	279.08	7,154.32	135.95	496.80	514.13	0.12	-0.06	-7.89
7,285.00	0.38	265.45	7,248.31	136.02	495.93	513.30	0.35	-0.33	-14.50
7,380.00	0.19	207.95	7,343.31	135.85	495.54	512.88	0.34	-0.20	-60.53
7,474.00	0.44	130.83	7,437.31	135.48	495.74	513.00	0.47	0.27	-82.04
7,569.00	0.63	129.83	7,532.31	134.91	496.42	513.55	0.20	0.20	-1.05
7,663.00	0.88	121.70	7,626.30	134.19	497.43	514.39	0.29	0.27	-8.65
7,758.00	0.38	283.07	7,721.29	133.88	497.74	514.63	1.31	-0.53	169.86
7,852.00	0.56	256.20	7,815.29	133.84	496.99	513.89	0.30	0.19	-28.59
7,947.00	0.56	249.58	7,910.29	133.57	496.11	512.97	0.07	0.00	-6.97
8,041.00	0.50	223.95	8,004.28	133.12	495.39	512.18	0.26	-0.06	-27.27
8,135.00	0.44	214.20	8,098.28	132.52	494.91	511.58	0.11	-0.06	-10.37
8,230.00	0.38	169.70	8,193.28	131.91	494.76	511.31	0.33	-0.06	-46.84
8,324.00	0.44	154.33	8,287.28	131.28	494.97	511.38	0.13	0.06	-16.35
8,418.00	0.75	139.70	8,381.27	130.48	495.52	511.76	0.36	0.33	-15.56
8,513.00	1.13	135.45	8,476.26	129.34	496.58	512.56	0.41	0.40	-4.47
8,607.00	1.44	137.95	8,570.23	127.80	498.02	513.66	0.34	0.33	2.66
8,702.00	1.88	136.58	8,665.19	125.79	499.89	515.07	0.47	0.46	-1.44
8,797.00	2.31	128.83	8,760.13	123.45	502.46	517.10	0.54	0.45	-8.16
8,891.00	2.00	144.33	8,854.06	120.93	504.89	518.97	0.70	-0.33	16.49

Andarko Petroleum Corporation

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well MORGAN STATE 921-36P4BS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Site:	UINTAH_MORGAN STATE 921-36P PAD	**MD Reference:**	26' RKB + 5010' GL @ 5036.00ft
Well:	MORGAN STATE 921-36P4BS	**North Reference:**	True
Wellbore:	MORGAN STATE 921-36P4BS	**Survey Calculation Method:**	Minimum Curvature
Design:	MORGAN STATE 921-36P4BS	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,986.00	2.38	126.83	8,949.00	118.40	507.43	520.94	0.80	0.40	-18.42
9,080.00	2.38	126.83	9,042.91	116.06	510.56	523.51	0.00	0.00	0.00
9,175.00	2.69	122.70	9,137.82	113.68	514.01	526.40	0.38	0.33	-4.35
9,293.00	2.31	128.08	9,255.71	110.71	518.22	529.91	0.38	-0.32	4.56
LAST MWD SURVEY									
9,353.00	2.31	128.08	9,315.66	109.22	520.12	531.46	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,541.00	2,520.40	-22.80	294.54	TIE ON
2,595.00	2,573.91	-23.38	301.84	FIRST MWD SURVEY
9,293.00	9,255.71	110.71	518.22	LAST MWD SURVEY
9,353.00	9,315.66	109.22	520.12	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____